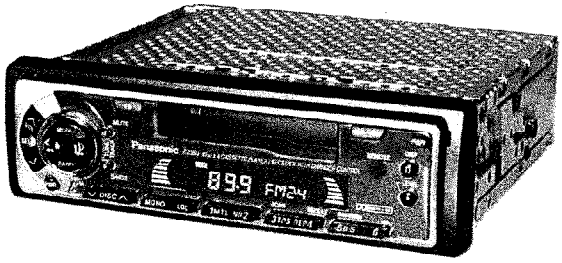
ORDER NO. ACED0002552
C1

Service Manual

AUTOMOTIVE CONSUMER ELECTRONICS



CQ-R235U

Removable Face High-Power Cassette Player / Receiver with Changer Control

Specifications*

General	
Power Supply	DC 12V (11V - 16V), Test Voltage 14.4V Negative Ground
Tone Controls	Bass ; ±12 dB at 100Hz Treble ; ±12 dB at 10kHz
Current Consumption	Less than 2.0A (Tape play mode, 0.5W×4-Speaker)
Maximum Power Output	40W × 4ch (at 4Ω)
Speaker Impedance	4 - 8Ω
Pre-Amp Output Voltage	2.0V (As CD Changer connected)
Pre-Amp Output Impedance	600Ω
FM Stereo Radio	
Frequency Range	87.9 - 107.9MHz
Usable Sensitivity	13.2dBf (75Ω)
Frequency Response	30 - 15,000Hz ±3dB
Stereo Separation	35 dB (at 1,000Hz)
AM Radio	
Frequency Range	531 - 1,602kHz
Usable Sensitivity	28dB/μV (S/N 20dB)

Cassette Player	
Reproduction System	4-track, 2-program stereo
Tape Speed	4.76 cm/sec
FF/REW Time	Less than 110 sec (C-60)
Frequency Response	30Hz to 17,000Hz (normal) 30Hz to 18,000Hz (metal)
Signal to Noise Ratio	52 dB (Dolby off) 62 dB (Dolby B NR on)
Wow and Flutter	0.12% (WRMS)
Dimensions**	178(W) ×50(H) ×150(D)(mm)
Weight**	1.5kg

* Specifications and the design are subject to possible modification without notice due to improvements.

** Dimensions and Weight shown are approximate.

● Above specifications comply with EIA standards.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double-D symbol ⧈ are trade marks of Dolby Laboratories Licensing Corporation.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

© 2000 Matsushita Communication Industrial Co., Ltd. All rights reserved. Unauthorized copying and distribution is a violation of law.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

CONTENTS

	Page
1 FEATURES	2
2 REPLACEING THE FUSE	2
3 MAINTENANCE	2
4 RADIO BLOCK ALIGNMENT	2
5 DIMENSIONS	2
6 OPERATING INSTRUCTIONS	3
7 WIRING CONNECTION	8
8 BLOCK DIAGRAM	9
9 TERMINALS DESCRIPTION	10
9.1. Main Block	10
9.2. Display Block	10
10 ALIGNMENT INSTRUCTIONS	11
10.1. Alignment Conditions	11
10.2. Dolby NR Alignment	11
11 ALIGNMENT POINTS	11
12 RE-ASSEMBLY PROCEDURE for REEL PWB Assy	12
13 PACKAGE AND IC BLOCK DIAGRAM	13
13.1. Main Block	13
13.2. Display Block	15
13.3. Tape Block	15
14 REPLACEMENT PARTS LIST	16
15 EXPLODED VIEW (Unit)	20
16 TAPE PLAYER PARTS	21
16.1. ICs and Transistors	21
16.2. Diodes	21
16.3. Capacitors	21
16.4. Resistors	21
16.5. Connectors	21
16.6. Electric Parts	21
16.7. Mechanical Parts	21
17 EXPLODED VIEW (Tape Deck)	23
18 PACKING PARTS LIST	24
19 WIRING DIAGRAM	25
19.1. Display Block	25
19.2. Main Block -1 (Top View)	26
19.3. Main Block -2 (Bottom View)	27
19.4. Tape Block	28
20 SCHEMATIC DIAGRAM	29
20.1. Main Block	29
20.2. Display Block	30
20.3. Tape Block	31

1 FEATURES

- PLL (Phase Locked Loop) synthesized tuning.
- 18-FM, 6-AM presets with preset scan.
- 40W × 4ch Power Output.
- Intelligent Volume Control.
- Removable face plate.

2 REPLACEING THE FUSE

Use fuses of the same specified rating 15amps. Using different substitutes or fuses with higher ratings, or connecting the unit directly without a fuse, could cause fire or damage to the stereo unit.

3 MAINTENANCE

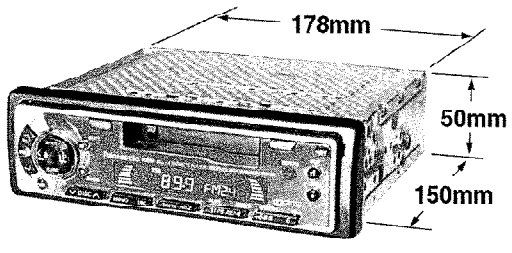
Your products is designed and manufactured to ensure a minimum of maintenance. Use a soft cloth for routine exterior cleaning. Never use benzine, thinner or other solvent.

4 RADIO BLOCK ALIGNMENT

● RADIO BLOCK

Do not align the AM and FM package blocks. When the package block is necessary, it will be supplied already aligned at the factory.

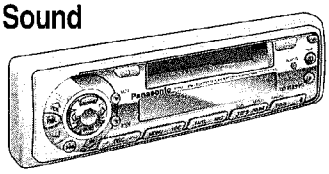
5 DIMENSIONS

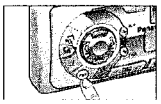


6 OPERATING INSTRUCTIONS

ENGLISH 1

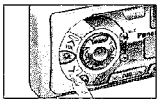
Power and Sound Controls





Power

Turn the key in the ignition until the accessory indicator lights.
Press [PWR] to switch on the power.
Press [PWR] again to switch off the power.



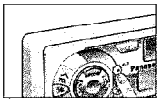
Volume

- Press [∧VOL] or [∨VOL] to increase or decrease the volume.

Volume Level (0 to 40)

- Press and hold [∧VOL] or [∨VOL] for more than 0.5 seconds to change the numeric level in sequence.

Anti-Volume-Blast Circuit
This product has a safety function which slowly raises volume level when power is switched back on after it is turned off at a specific level (20) or higher.



Mute

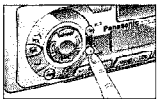
- Press [M](MUTE) to mute the sound completely.

- Press [M](MUTE) again to cancel.

Note: In the audio mode (BAS/TRE/BAL/FAD), the display will be back to regular operation mode with no operation for more than 5 seconds (2 seconds in the VOL mode).

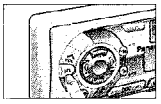
CQ-R235U

ENGLISH 2



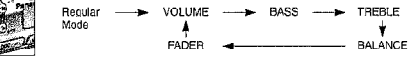
S•HDB (Super High Definition Bass)

Especially for rock music, the bass-sound will be more powerful.
- Press [S](S•HDB) to be able to listen to high-definition bass.
- Press [S](S•HDB) again to return to the normal tone.



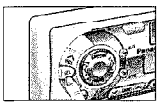
Audio Mode

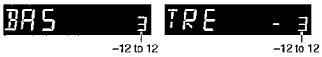
Press [SEL] to change the audio mode setting as follows.



Bass and Treble

- Press [SEL] to change to the bass (or treble) mode. Press [∧VOL] or [∨VOL] to increase or decrease the bass (or treble) level.

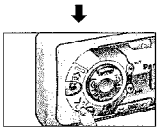




−12 to 12 −12 to 12

Balance

- Press [SEL] to change to the balance mode. Press [∧VOL] or [∨VOL] to shift the sound volume to the right (R) or left (L) speakers.



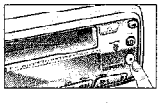
or L 1 to 15 Balance Center

Fader

- Press [SEL] to change to the fader mode. Press [∧VOL] or [∨VOL] to shift the sound volume to the front (F) or rear (R) speakers.

or R 1 to 15 Fader Center

Note: In the audio mode (BAS/TRE/BAL/FAD), the display will be back to regular operation mode with no operation for more than 5 seconds (2 seconds in the VOL mode).



Level Meter

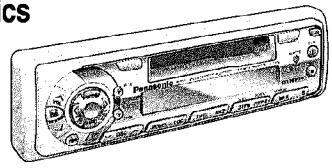
Press [•](LEVEL) to display the level of sound sources.
Press [•](LEVEL) again to cancel.

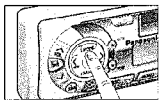
Note: The level meter indications do not change when VOL, BAL, or other control is turned.

CQ-R235U

ENGLISH 3

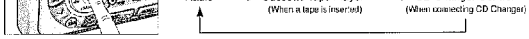
Radio Basics

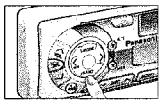




Tuner Mode

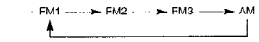
Press [MODE] to change the operation mode setting as follows.



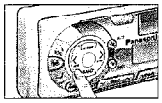


Band

Press [BAND] to change the band setting as follows.

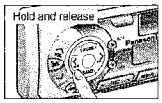


"ST" indicator lights during reception of an FM stereo broadcast.



Manual Tuning

Press [<TUNE] or [>TUNE] to tune in a higher or lower frequency.

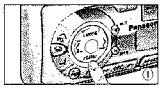


Seek Tuning

Press and hold [<TUNE] or [>TUNE] for more than 0.5 seconds, then release it. Tuning will automatically stop when the signals of the next broadcast station are received.

CQ-R235U

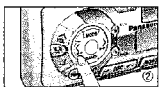
ENGLISH 4

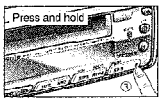


Station Preset

FM1, FM2, FM3 and AM can save a maximum 6 stations each in their preset station memories.

Caution: To ensure safety, never attempt to preset stations while you are driving.



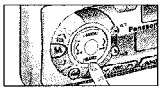


Manual Station Preset

① Press [BAND] to select a desired band.
② Use manual or seek tuning to find a station which is to be preset in the memory.
③ Press and hold one of the preset buttons [1] to [6] until the display blinks.

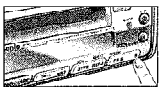
Preset Number

Note: You can change the memory presetting by repeating the above procedure.



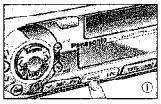
Auto Station Preset

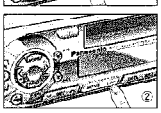
Select the band and press and hold [BAND](AFM) for more than 2 seconds (Auto Preset Memory).
- The 6 strongest available stations will be automatically saved in the memory on preset buttons [1] to [6].
- Once set, the preset stations are sequentially scanned for 5 seconds each.



Tuning in a Preset Station

Press the corresponding preset button [1] to [6] to tune in a preset station.





MONO/LOCAL Selection

- At the MONO setting, noise is significantly decreased when weak signals are received from an FM broadcast station. (Only for FM mode)
- At the LOCAL setting, only strong signals of stations are searched in seek tuning, while at the LOCAL OFF setting, relatively weak signals are also searched.

Press [MONO] to switch on or off the MONO mode as follows.

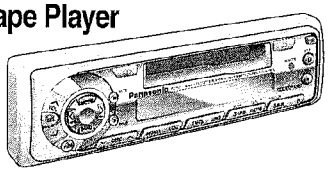
MONO OFF ◄► MONO ON

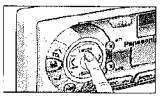
Press [LOC] to switch on or off the LOCAL mode as follows.

LOCAL OFF ◄► LOCAL ON

CQ-R235U

Cassette Tape Player Basics

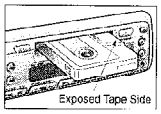




Mode Selection

Press [MODE] to change the operation mode setting as follows.

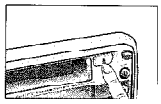
Radio → Cassette Tape Player (When a tape is inserted) → CD Changer Control (When connecting CD Changer)



Exposed Tape Side

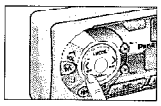
Loading a Tape

Insert a cassette with the exposed tape side facing to the right. Gently push the cassette in until the loading begins. The cassette will be loaded in place and playback starts.



Ejecting the Tape

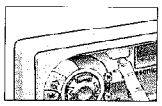
Press [⏏] to eject the tape. The previous operation mode will resume.
Note: Always remove the cassette tape from the unit when the cassette tape player is not being used.



Rewind and Fast Forward

Press [◄◄TRACK] or [►►TRACK] to activate rewind or fast forward of the tape.

Press [◄►] to stop.
If you rewind the tape fully, it will play on the same program side again.
If you fast forward to the end, play will resume from the beginning of the other side of the tape.

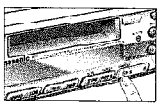


Changing Sides

Press [◄►] to reverse.

Top Side Playing

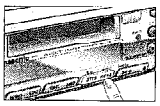
Bottom Side Playing



Blank Skip

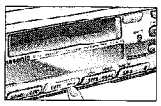
- Press [5](B•S) to skip long unrecorded portions on the tape.
- Press [5](B•S) again to cancel.

Notes:
- When repeat is on, the blank skip does not work because the repeat has priority over the blank skip.
- The blank skip does not work when an unrecorded portion of a tape is less than 15 seconds.



Repeat Play

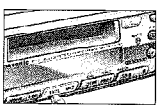
- Press [4](REP) to repeat the current program.
- Press [4](REP) again to cancel.



Dolby Noise Reduction

- Press [2](NR) to set the Dolby B NR mode.
- Press [2](NR) again to cancel.

Note: Set the Dolby B NR mode when playing back a tape recorded with Dolby B Noise Reduction.

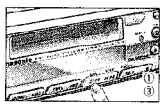


Metal Tape Mode

- Press [1](MTL) when playing metal or chromium dioxide (CrO_2) tapes.
- Press [1](MTL) again to cancel.

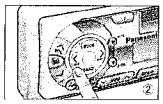
Note: Playing non-metal tapes in MTL mode causes high frequency imbalance, which affects tone quality.

Cassette Tape Player Basics (continued)



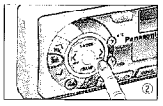
TPS Operation (Tape Program Search)

① Press [3](TPS) to activate the tape program search mode.



② To select a desired program, press [►►TRACK] or [◄◄TRACK] corresponding times to go forward (up to 9) or backward (up to 8).

(Rewind:) 8 ◄---------- 0 (Fast forward:) 1 ----------► 9

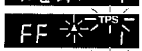


or

Ex1. To select the current program again, press [3](TPS) and [◄◄TRACK].

Ex2. To select the last program, press [3](TPS) and [◄◄TRACK] twice.

Ex3. To select the next program, press [3](TPS) and [►►TRACK].



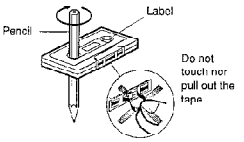
Ex4. To select the next 3rd program, press [3](TPS) and [►►TRACK] three times.

③ Press [3](TPS) again to cancel.

Notes:
The TPS mode may not work correctly in the following cases. This, however, does not mean that the unit is defective.
- There is an interval less than 4 seconds or having a high level of noise or hum between programs.
- There is particularly low-level passage during the program.

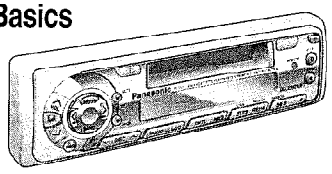
Notes on Cassette Tapes

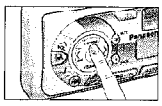
Tape Slack:
Use a pencil or similar object to take up the slack as shown. If a loose tape is used, this may result in the tape becoming tangled in the rotating parts of the product.



CD Changer Basics

Note: CD changer functions are designed for an optional CD changer unit.

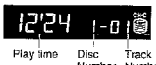




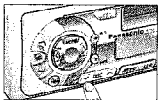
Starting the CD Changer

Once the CD changer has been connected, press [MODE] to change to the CD changer mode as follows. When a disc magazine is inserted, CD play starts automatically.

Radio → Cassette Tape Player (When a tape is inserted) → CD Changer Control (When connecting CD Changer)

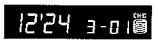


Play time | Disc Number | Track Number

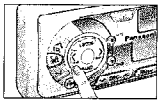


Disc Selection

Press [▽DISC] or [△DISC] to select a disc in descending or ascending order.

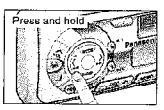


Then, the selected disc will start to play from the first track.



Track Selection

- Press [►►TRACK] to advance to the next track.
- Press [◄◄TRACK] to start play from the beginning of the track now playing.
- Press [►►TRACK] or [◄◄TRACK] repeatedly to skip the desired number of tracks.



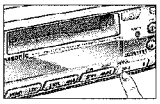
Track Search

- Press and hold [►►TRACK] or [◄◄TRACK] for more than 0.5 seconds to activated fast forward or reverse.
- Release [►►TRACK] or [◄◄TRACK] to resume regular CD changer play from the released position.

CD Changer Basics (continued)

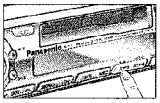
Track Repeat

- Press [4](REPEAT) to repeat the current selection.
- Press [4](REPEAT) again to cancel.



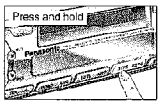
Random Selection

- Press [5](RANDOM). All the available tracks will be played in a random sequence.
- Press [5](RANDOM) again to cancel.



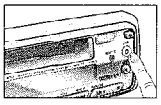
Track Scan

- Press [3](SCAN). The display blinks, and the first 10 seconds of each track on the discs play in sequence.
- Press [3](SCAN) again to cancel.



Disc Scan

Press and hold [3](SCAN) for more than 2 seconds. The 1st track of all the discs in the magazine is played for 10 seconds each. Press and hold [3](SCAN) for more than 2 seconds again to cancel.



Changing the Display

Press [D](DISP) to switch the display as follows.

Play Time/Disc/Track ⟷ Clock display

Note: You cannot change the current display while the CD changer is set to the scan play mode.

❑ Error Display Messages

E-1	Displays when the compact disc is dirty or inverted. Selects the next available compact disc.
E-2	Displays when compact disc is scratched. Selects next available compact disc.
E-3	Displays when the compact disc stops operating for some reason. Please turn off the car engine (ACC off) and remove the fuse from yellow lead for 1 minute. Then reinstall the fuse.
0000	Displays when there is no disc in the magazine.

Installation Guide

⚠ WARNING

This installation information is designed for experienced installers and is not intended for non-technical individuals. It does not contain warnings or cautions of potential dangers involved in attempting to install this product.

Any attempt to install this product in a motor car by anyone other than qualified installer could cause damage to the electrical system and could result in serious personal injury or death.

❑ Overview

This product should be installed by a professional. However, if you plan to install this product yourself, your first step is to decide where to install it. The instructions in these pages will guide you through the remaining steps. **(Please refer to the "WARNING" statement above).**

- Identify and label the car wires.
- Connect the car wires to the wires of the power connector.
- Install the unit in the dash.
- Check the operation of the unit.

If you encounter problems, please consult your nearest professional installer.

Caution: This unit operates with a 12 volt DC negative ground auto battery system only. Do not attempt to use it in any other system. Doing so could cause serious damage.

Before you begin installation, look for the items on the right which are packed with your unit.

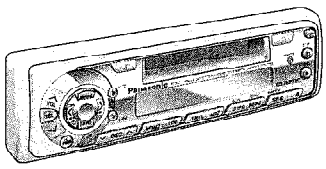
- **Warranty Card** ..... Fill this out promptly.
- **Panasonic Servicenter for Service Directory** ..... Keep for future reference in case the product needs servicing.
- **Installation Hardware** ..... Needed for in-dash installation

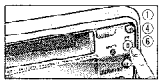
❑ Installation Hardware

No.	Item	Diagram	Q'ty
①	Mounting Collar		1
②	Hex. Nut (5 mmϕ)		1
③	Rear Support Strap		1
④	Tapping Screw (5 mmϕ x 16 mm)		1
⑤	Mounting Bolt (5 mmϕ)		1
⑥	Power Connector		1
⑦	Diamounting Plate		1
⑧	Removable Face Plate Case		1
⑨	Trim Plate		1

Clock Basics

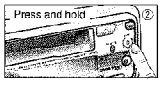
The 12-hour system is used for the clock.

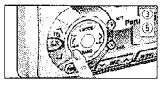




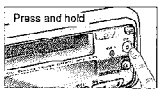
Initial Time

① Press [D](DISP). "ADJ" appears on the display.
② Press and hold [D](DISP) again for more than 2 seconds. "12" blinks, and the time setting mode is activated.
③ Press [<TUNE] or [>TUNE] to set the hour.
④ Press [D](DISP) again to proceed with the minutes setting.
⑤ Press [<TUNE] or [>TUNE] to set the minute.
Press and hold [<TUNE] or [>TUNE] for more than 0.5 seconds to change numbers on the display in sequence.
⑥ Once the time has been set, press [D](DISP).



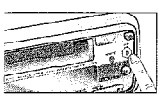


Note: The [D](DISP) button will not work while the CD changer is set to the scan play mode. Cancel the scan play mode before pressing [D](DISP).



Time Reset

Press and hold [D](DISP) for more than 2 seconds to activate the time setting mode to reset the time. Then, repeat step ③ to ⑥ above.



Clock Display

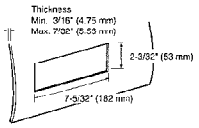
Press [D](DISP).

❑ Required Tools

You'll need a screwdriver, a 1.5 volt AA battery, and the following:

12 V DC Test Bulb | Electrical Tape | Side-Cut Pliers

❑ Dashboard Specifications

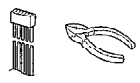


❑ Identify All Leads

The first step in installation is to identify all the car wires you'll use when hooking up your sound system.
As you identify each wire, we suggest that you label it using masking tape and a permanent marker. This will help avoid confusion when making connections later.

Note: Do not connect the power connector to the stereo unit until you have made all connections. If there are no plastic caps on the stereo hooking wires, insulate all exposed leads with electrical tape until you are ready to use them. Identify the leads in the following order.

Power Lead
If your car has a radio or is pre-wired for one:
Cut the connector wires one at a time from the plug (leaving the leads as long as possible) so that you can work with individual leads.



Turn the ignition on to the accessory position, and ground one lead of the test bulb to the chassis.

Touch the other lead of the test bulb to each of the exposed wires from the cut radio connector plug. Touch one wire at a time until you find the outlet that causes the test bulb to light.

Now turn the ignition off and then on. If the bulb also turns off and on, that outlet is the car power lead.

If your car is not wired for an audio unit:
Go to the fuse block and find the fuse port for radio (RADIO), accessory (ACC), or ignition (IGN).

Battery Lead
If your stereo unit has a yellow lead, you will need to locate the car's battery lead. Otherwise you may ignore this procedure. (The yellow battery lead provides continuous power to maintain a clock, memory storage, or other function.)

If your car has a radio or is pre-wired for one:
With the ignition and headlights off, identify the car battery lead by grounding one lead of the test bulb to the chassis and checking the remaining exposed wires from the cut radio connector plug.

If your car is not wired for an audio unit:
Go to the fuse block and find the fuse port for the battery, usually marked BAT.

Speakers
Identify the car speaker leads. There are two leads for each speaker which are usually color coded.
A handy way to identify the speaker leads and the speaker they connect with is to test the leads using a 1.5 volt AA battery as follows.

Hold one lead against one pole of the battery and stroke the other lead across the other pole. You will hear a scraping sound in one of the speakers if you are holding a speaker lead.
If not, keep testing different lead combinations until you have located all the speaker leads. When you label them, include the speaker location for each.

ENGLISH 13

Installation Guide (continued)

Antenna Motor
If your car is equipped with an automatic power antenna, identify the car motor antenna lead by connecting one bulb tester lead to the car battery lead and touching the remaining exposed wires from the cut radio connector plug one at a time. You will hear the antenna motor activate when you touch the correct wire.

Antenna
The antenna lead is a thick, black wire with a metal plug at the end.

❑ Connect All Leads

Now that you have identified all the wires in the car, you're ready to begin connecting them to the stereo unit wires. The connection diagram (➡ Page 23) shows the proper connections and color coding of the leads.
We strongly recommend that you test the unit before making a final installation.
You can set the unit on the floor and make temporary connections to test the unit. Use electrical tape to cover all exposed wires.

Important: Connect the red power lead last, after you have made and insulated all other connections.

Ground
Connect the black ground lead of the power connector to the metal car chassis.

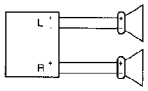
Speakers
Connect the speaker wires. See the wiring diagram below for the proper hookups. Follow the diagram carefully to avoid damaging the speakers and the stereo unit.

The speakers used must be able to handle more than 40 watts of audio power. If using an optional audio amplifier, the speakers should be able to handle the maximum amplifier output power. Speakers with low input ratings can be damaged.

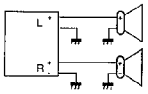
Speaker impedance should measure 4 - 8 ohms, which is typically marked on most speakers. Lower or higher impedance speakers will affect output and can cause both speaker and stereo unit damage.

Caution: Never ground the speaker cords. For example, do not use a chassis ground system or a three-wire speaker common system. Each speaker must be connected separately using parallel insulated wires. If in doubt about how your car's speakers are wired, please consult your nearest professional installer.

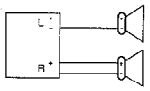
CORRECT
No Common Ground



INCORRECT
Common Chassis Ground



INCORRECT
Speaker Common
(common earth lead)



Motor Antenna
Connect the car motor antenna lead to the blue motor antenna relay control lead.

Battery
Connect the yellow battery lead to the correct radio wire or to the battery fuse port on the fuse block.

ENGLISH 14

Antenna
Connect the antenna by plugging the antenna lead into the antenna receptacle.

Equipment
Connect any optional equipment such as an amplifier, according to the instructions furnished with the equipment. Leave about 12 inches (30 cm) of distance between the speaker cords/amplifier unit and the antenna/antenna extension cord. Read the operating and installation instructions of any equipment you will connect to this unit.

Power
Connect the red power lead to the correct car radio wire or to the appropriate fuse port on the fuse block.
If the stereo unit functions properly with all these connections made, disconnect the wires and proceed to the final installation.

❑ Final Installation

Lead Connections
Connect all wires, making sure that each connection is insulated and secure. Bundle all loose wires and fasten them with tape so they won't fall down later. Now insert the stereo unit into the mounting collar.

Congratulations! After making a few final checks, you're ready to enjoy your new auto stereo system.

❑ Final Checks

1. Make sure that all wires are properly connected and insulated.
2. Make sure that the stereo unit is securely held in the mounting collar.
3. Turn on the ignition to check the unit for proper operation.

If you have difficulties, consult your nearest authorized professional installer for assistance.

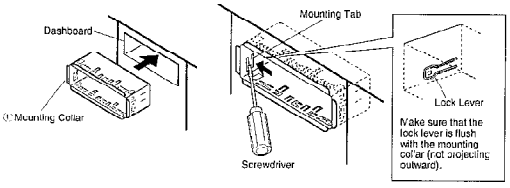
❑ Precautions

- When bending the mounting tab of the mounting collar with a screwdriver, be careful not to injure your hands and fingers.
- We strongly recommend you to wear gloves for installation work to protect yourself from injuries.

❑ Installation Procedures

- Disconnect the cable from the negative (–) battery terminal.

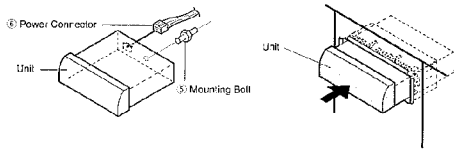
1. Secure the Mounting Collar ①.
Insert Mounting Collar ① into the dashboard, and bend mounting tabs out with a screwdriver.


Dashboard
① Mounting Collar
Mounting Tab
Screwdriver
Lock Lever
Make sure that the lock lever is flush with the mounting collar (not projecting outward).

ENGLISH 15

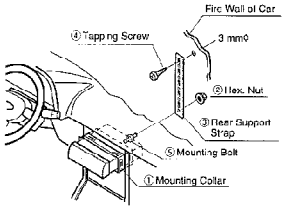
Installation Guide (continued)

2. Secure the rear of the unit.
a) Check the electrical connection by referring to this operating instructions. (➡ Page 23)
b) Connect Mounting Bolt ⑤, using a suitable wrench.
c) Insert Power Connector ⑥ to the unit.
d) Insert the unit into Mounting Collar ① and push it in until a "click" is heard.

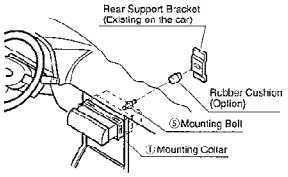


e) Secure the rear of the unit to the car by either of the two recommended methods as follows.

- **Using the Rear Support Strap ③**
  Affix one end of the Rear Support Strap ③ to the rear of the unit, and the other end to the fire wall of the car, or some other metallic area.



- **Using the Rubber Cushion (Option)**
  (If there is an existing Rear Support Bracket on the fire wall of the car.)
  Cover the Mounting Bolt ⑤ on the rear of the unit with Rubber Cushion (Option), and mount it into the existing Rear Support Bracket.

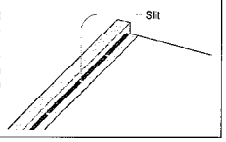


3. After installation reconnect the negative (–) battery terminal.

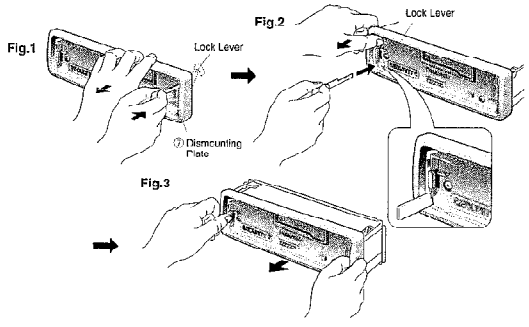
ENGLISH 16

To remove the trim plate (for Japanese Cars)
You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your dealer or professional installer.

To mount this unit on a Japanese car, first cut the 9 slits in back of the trim plate with side-cut pliers, remove the trim plate, then mount this unit.
If you find a trim plate necessary after mounting the unit inside, use the supplied Trim Plate ③.



To Remove the Unit
a) Remove the removable face plate. (See Anti-Theft System below.)
b) Pull out the unit while pushing the lock lever using Dismounting Plate ⑦. (➡ Fig.1, 2)
c) Remove the unit by pulling it with both hands. (➡ Fig.3)

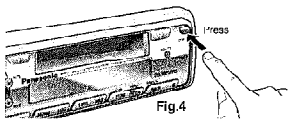


Note: Do not lose the Dismounting Plate. It will be needed to remove the unit from the car's dashboard.

Anti-Theft System

This unit is equipped with a removable face plate. By removing this face plate, the radio becomes totally inoperable. The security indicator will blink.

To Remove the Removable Face Plate
a) Switch off the power.
b) Press the release button (⏏).
The removable face plate will be released.



ENGLISH 17

Installation Guide (continued)

c) Remove the removable face plate by pulling on the right side of the unit. Place the removable face plate in a supplied case.

d) As shown in Fig.6, gently push the lower side of the case and open its cover. Keep the removable face plate in the case. Then you can safely take the plate with you.

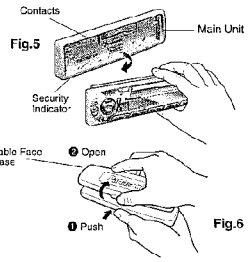


Fig.5 Fig.6

To install the Removable Face Plate

a) Slide the left side of the removable face plate in place.
b) Press the right end of removable face plate until a "click" is heard.

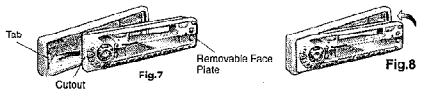


Fig.7 Fig.8

Cautions:
1. Before removing the removable face plate, make sure the power is off.
2. This removable face plate is not water-proof. Do not expose it to water or excessive moisture.
3. Do not remove the removable face plate, while driving your car.
4. Do not place the removable face plate on the dashboard or nearby areas where the temperature rises to high levels.
5. Do not touch the contacts on the removable face plate or on the main unit, since this may result in poor electrical contacts.
6. If dirt or other foreign substances get on the contacts, wipe them with a clean and dry cloth.

Security Indicator

The security indicator blinks when the removable face plate is removed from the unit.

To Deactivate Security Indicator

Press and hold **[SEL]** for more than 2 seconds when the power is ON. "LEd" "OFF" is displayed, and the security indicator turns off. (Default: LED ON)

Display	Security Indicator
"LEd" "ON"	Blinks
⇅	(Press and hold [SEL] for more than 2 seconds.)
"LEd" "OFF"	OFF

Cautions: When you want to remove the unit, the security indicator functions can be canceled by the following procedure.
- Install the removable face plate.
- Disconnect the power connector for more than 3 minutes and then reconnect it.

ENGLISH 19

Troubleshooting

❑ Maintenance

Your product is designed and manufactured to ensure a minimum of maintenance. Use a soft cloth for routine exterior cleaning. Never use benzine, thinner or other solvents.

❑ When Something Doesn't Work

Check the charts for possible causes and solutions to any problem you might be experiencing. Some simple checks or minor adjustments may eliminate the problem.

❑ Product Servicing

If the suggestions in the charts don't solve the problem, we recommend that you take it to your nearest authorized Panasonic Servicenter. The product should be serviced only by a qualified technician.

❑ Replace the Fuse

Use fuses of the same specified rating (15 amps). Using different substitutes or fuses with higher ratings, or connecting the product directly without a fuse, could cause fire or damage to the stereo unit.
If the replacement fuse fails, contact your nearest Panasonic Servicenter for service.

❑ Troubleshooting Tips

Problem	Possible Cause	Probable Solution
Unit does not turn on.	Dead car battery Ignition not on Bad power line connection Fuse is blown.	Charge car battery. Turn the ignition key to On (ACC). Check connections. Replace fuse. (See Replace the Fuse above.)
Radio has static.	Antenna not hooked up Close to high power lines	Hook up antenna Move away from high power lines.
Radio memory buttons do not work.	Not holding buttons down long enough	Press and hold buttons for more than 2 seconds.
Tape sound quality is poor.	Heads are dirty. Poor quality tape	Clean heads. (Ask a service representative for advice.) Use better quality tape.
CD changer does not operate.	Unit not properly connected Unit not switched into CD changer mode No CDs in the magazine	Check connections. Press **[MODE]** to select CD changer mode. Check disc magazine.
CD does not play a specific disc.	Disc loaded inverted Disc damaged Disc not loaded in magazine	Reload disc properly. Check disc for scratches and chips. Check disc magazine.

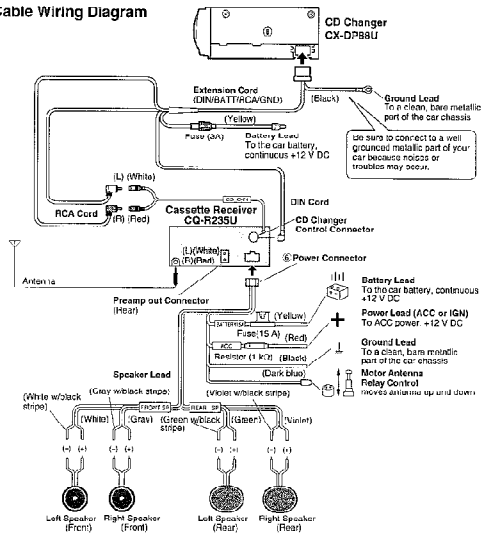
Electrical Connection

ENGLISH 16

Cautions:
- This product is designed to operate with a 12 volt, negative ground battery system.
- To prevent damage to the unit, be sure to follow the connection diagram below.
- Remove approx. 5 mm of protective covering from the ends of the leads before connecting.
- Do not insert the power connector into the unit until the wiring is completed.
- Be sure to insulate any exposed wires from a possible short-circuit from the car chassis. Bundle all cables and keep cable terminals free from touching any metal parts.

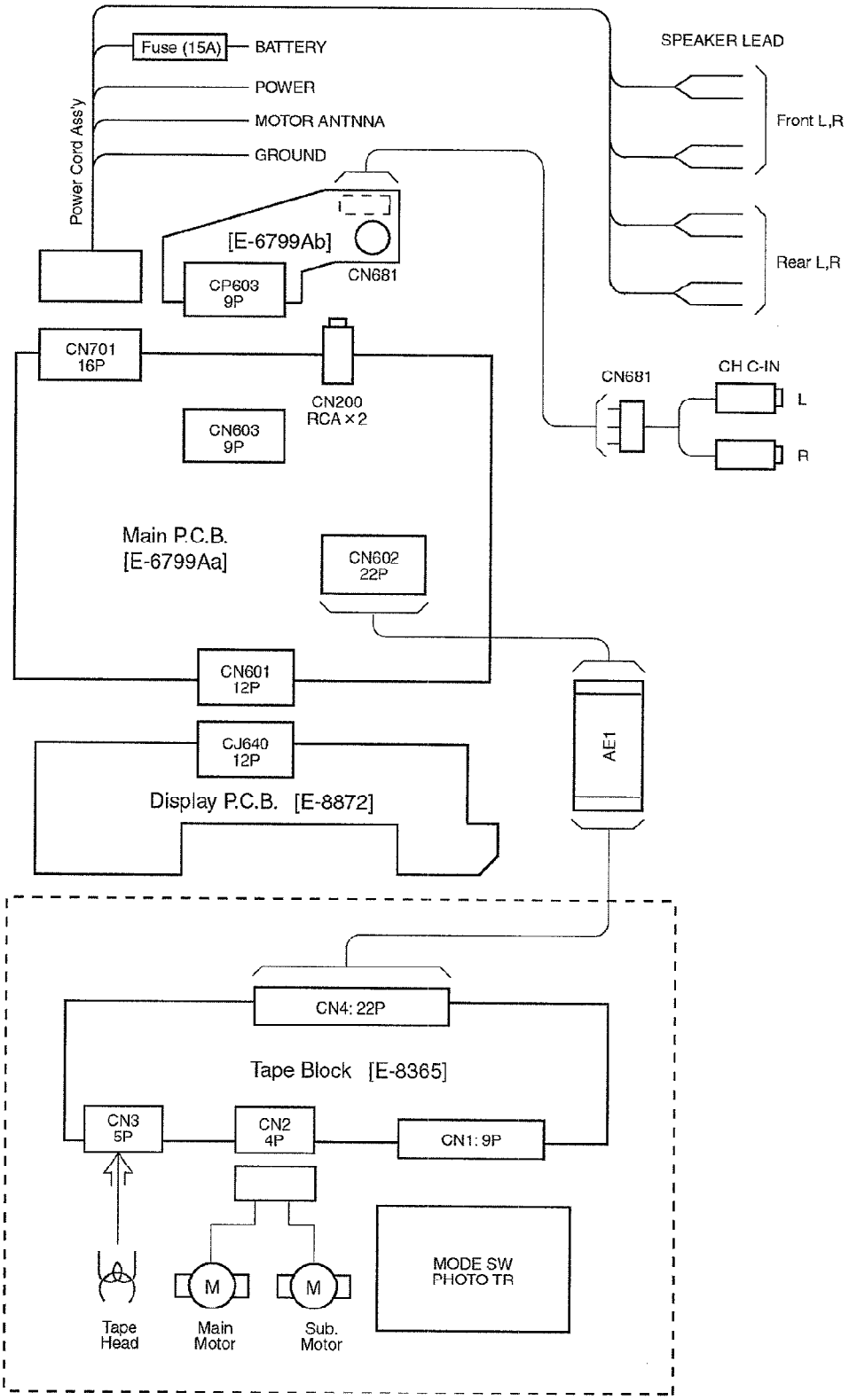
- This unit can be connected to an optional CD changer (CX-DP88U etc.). For details consult your nearest Panasonic dealers.
- For connection to a CD changer, refer to the operating instructions of the CD changer (CX-DP88U etc.).

Cable Wiring Diagram

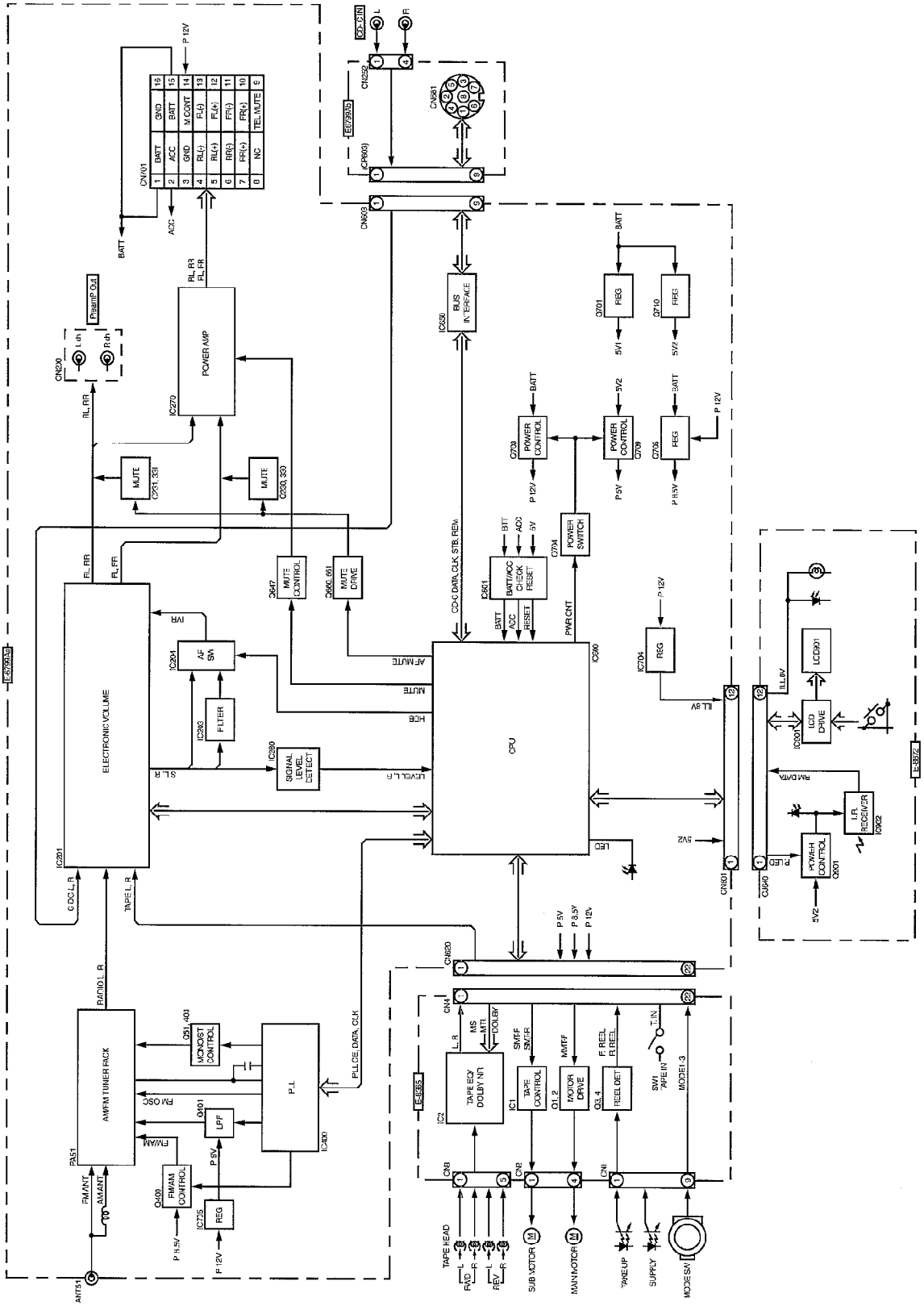


CQ-R235U

7 WIRING CONNECTION



8 BLOCK DIAGRAM



9 TERMINALS DESCRIPTION

9.1. Main Block

IC600 : C2BBGE000438

Pin No.	Port	Description	I/O	Vol.(V)		
				FM	AM	TAPE
1	INIT C	Initial C	I	5.2	5.1	5.1
2	LEVEL-R	Electric volume data R	O	1	1.4	2.1
3	LEVEL-L	Electric volume data L	O	1.2	1.3	2.3
4	AVSS	Analog ground	-	0	0	0
5	AF MUTE	AF mute	O	5.2	5.2	5.2
6	NC	No connection	-	-	-	-
7	VREF	Reference voltage	-	5.2	5.2	5.2
8	MODE1	Tape mode SW1	I	5	5	0
9	MODE2	Tape mode SW2	I	0	5	4.9
10	MODE3	Tape mode SW3	I	0	0	4.9
11	CD.C DATA	CD changer data	I	0	0	0
12	N.C	No connection	-	-	-	-
13	CD.C CLK	CD changer clock	I	0	0	0
14	REM OUT	Remoto data out	O	0	5.2	5.2
15	PLL CE	PLL controlier chip enable	O	0	0	0
16	PLL DATA (MI)	Data from PLL	I	5	5	5
17	PLL DATA (MO)	Data for PLL	O	0	0	0
18	PLL CLK	Clock for PLL	O	5.2	5.2	5.2
19	N.C	No connection	-	-	-	-
20	N.C	No connection	-	-	-	-
21	MMT-F	Main motor control	O	0	0	5.1
22	SMT-F	Sub motor control	O	5.2	5.2	5.1
23	DOLBY	Dolby on signal	O	0	0	0
24	F/R	Tape FF/REW detection	I	0	0	0
25	N.C	No connection	-	-	-	-
26	MS GAIN	MS gain control	O	5.2	5.2	5.1
27	MTL OUT	Metal tape select	O	0	0	0
28	SMT-R (CD-ON)	Sub motor control	O	5.2	5.2	5.1
29	R.REEL (CD-MUTE)	Tape REW detection	I	5	5	0
30	MS IN (CD-SW)	TPS input	I	5	5	4.3
31	F.REEL	Tape FF detection	I	5	5	0
32	T-IN	Tape detection	I	0	0	0
33	VSS	Ground	-	0	0	0
34	N.C	No connection	-	-	-	-
35	ST	FM stereo detection	I	5	5	5
36	I2C-CLK	Electronic volume clock	O	5	5	5
37	I2C-DATA	Electronic volume data	O	5	5	5
38	LED	Warming alarm LED control	O	3.7	3.7	4.1
39	HDB	HDB on	O	8.4	8.3	8
40	BZIN	(Not used)	-	-	-	-
41	LCD-DI (MO)	LCD data input	O	0	0	0
42	LCD-DO (MI)	LCD data output	I	5.1	5.1	5.1
43	LCD-CLK	LCD clock	O	0	0	0
44	LCD-CE	LCD chip enable output	O	0	0	0
45	POWER LED	Pilot lamp on	O	0	0	0
46	N.C	No connection	-	-	-	-
47	N.C	No connection	-	-	-	-
48	N.C	No connection	-	-	-	-
49	N.C	No connection	-	-	-	-
50	BZ OUT	BEEP output	O	0	0	0
51	N.C	No connection	-	-	-	-
52	N.C	No connection	-	-	-	-
53	N.C	No connection	-	-	-	-
54	N.C	No connection	-	-	-	-
55	PALEL	Panel detect	I	4.9	4.9	4.9
56	N.C	No connection	-	-	-	-
57	PWR CNT	Power control	O	5.1	5.1	5.1
58	ACC	ACC detection	I	5.2	5.2	5
59	RDS-DATA	RDS data input	I	0	0	0
60	RESET	Reset input	I	5.2	5.2	4.9
61	REM	Remocon data input (Note 2)	I	4.5	4.5	4.4
62	BATT	Battery detection	I	5.2	5.2	5.1
63	RDS-CLK	RDS clock input	I	0	0	0
64	CD.C STB	(Ground pull-down)	I	0	0	0
65	MUTE	Mute control	O	0	0	0
66	N.C	(Connecting to ground)	-	0	0	0
67	CD.C2	No connection	-	0	0	0
68	VDD	+5V power supply	-	5.2	5.2	5.2
69	X2	Crystal oscillator	-	3.2	3.2	3.2
70	X1	Crystal oscillator	-	2.9	2.9	2.9
71	VSS	Ground	-	0	0	0
72	N.C	No connection	-	-	-	-
73	TEL MUTE	Telephone mute	O	5.2	5.2	5.1
74	A VDD	+5V power supply	-	5.2	5.2	5.2
75	A VREF	(Connecting to VDD)	-	5.2	5.2	5.2
76	N.C	(Connecting to ground)	-	0	0	0
77	SD	Search detect	I	0.5	0	0
78	INTD	Initial value D	I	0	0	0
79	INTA	Initial value A	I	0	0	0
80	INTB	Initial value B	I	0	0	0

9.2. Display Block

IC901 : YEAMLC75854T

Pin No.	Port	Description	I/O	(V)
1 - 35	S1 - S35	LCD segment data	O	2.4
36 40	S36 S40	(Not used)		
41 - 43	COM1 - 3	LCD common	O	2.4
44 - 49	KS1 - KS6	Key data output	O	4.8
50 - 54	KI1 - KI5	Key data input	I	0
55	TEST	(Connecting to ground)	-	0
56	VDD	+5V Power supply	-	4.8
57	VDD1	+5V Power supply1	-	3.2
58	VDD2	+5V Power supply2	-	1.6
59	VSS	GND	-	0
60	OSC	CR oscillator	-	3.8
61	DO	LCD data output	O	4.8
62	CE	Chip enable	I	0
63	CLK	LCD clock input	I	0
64	DI	LCD data input	I	0

10 ALIGNMENT INSTRUCTIONS

10.1. Alignment Conditions

- Power Supply Voltage : DC14.4V
- Output Impedance : 4Ω
- Output Power : 0.5W
- Balance, Fader Control : Center
- Bass, Treble Control : Center

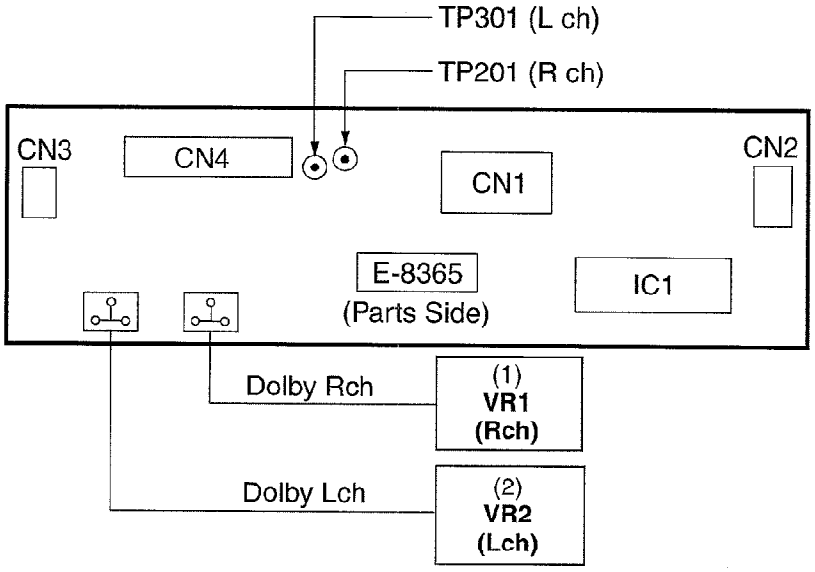
Note:

Do not align the FM/AM package blocks. When the package block is necessary, it will be supplied already aligned at the factory.

10.2. Dolby NR Alignment

Step	Alignment Item	Test Tape	VTVM Connection	Adjust	Remarks
1	DOLBY NR Rch	RFKZ0038	TP201	VR1	Adjust for 388mV ±20mV
2	DOLBY NR Lch	RFKZ0038	TP301	VR2	Adjust for 388mV ±20mV

11 ALIGNMENT POINTS

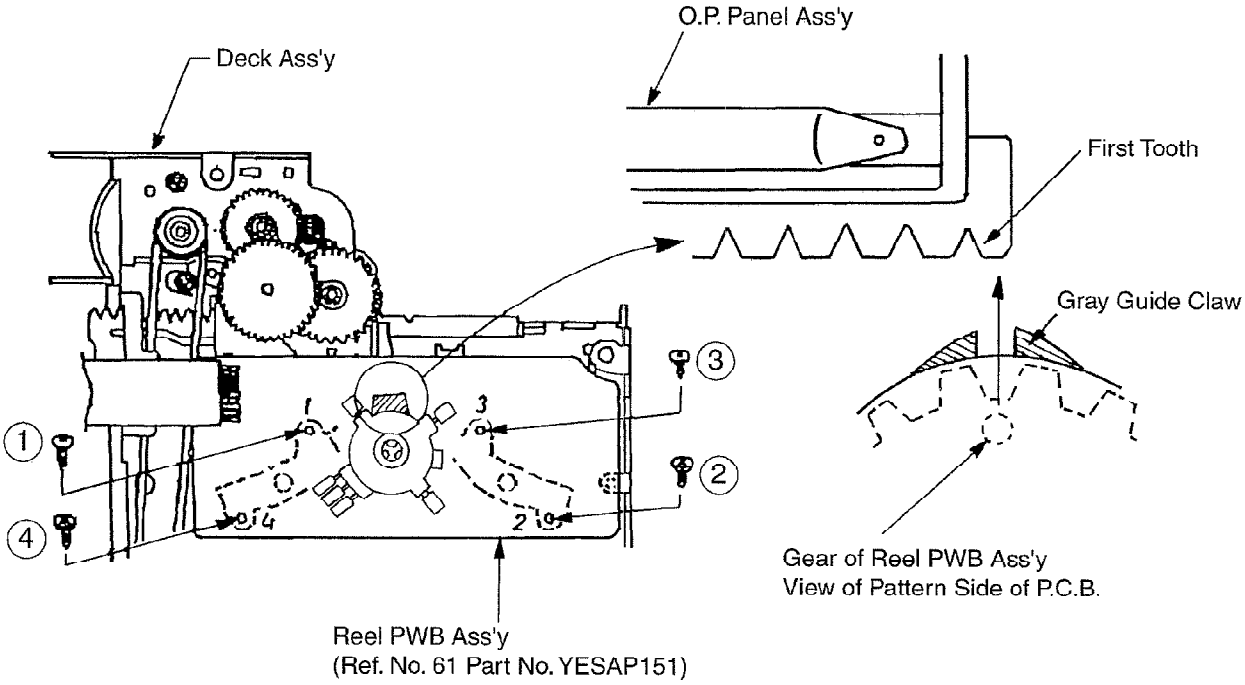


CQ-R235U

12 RE-ASSEMBLY PROCEDURE for REEL PWB Assy

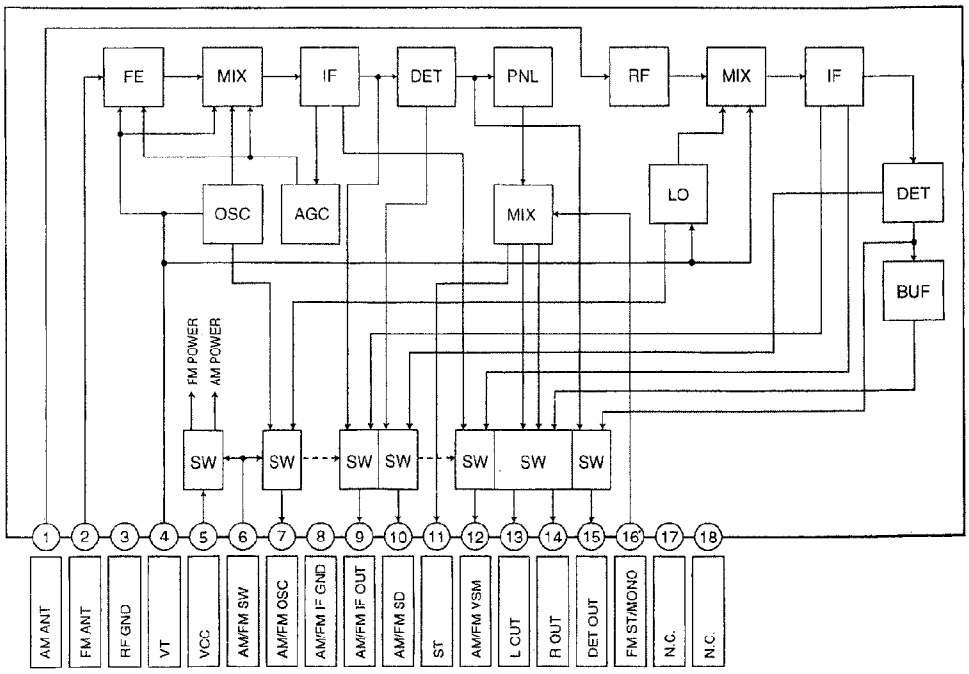
• When you re-assembly the REEL PWB Ass'y please refer to the following procedure.

1. Set the gear of Reel PWB Ass'y (Ref. No. 61) into the first tooth of O.P. Plate Ass'y (Ref. No. 20) as shown below.
2. Tighte the (1-4) screws of Reel PWB Ass'y shown in the figure.

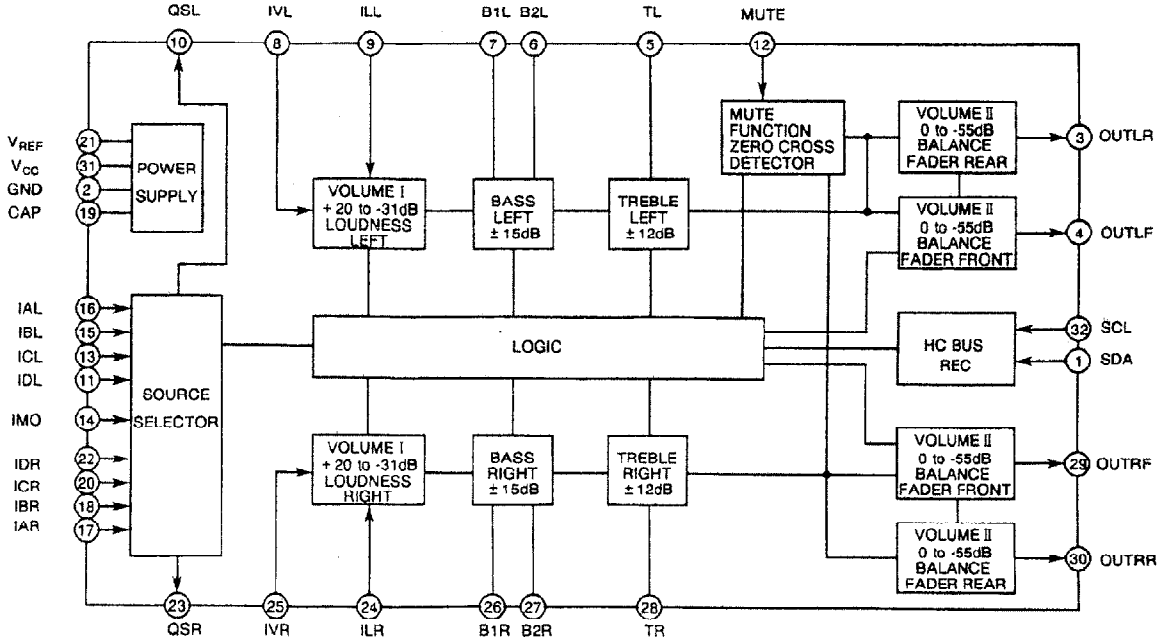


13 PACKAGE AND IC BLOCK DIAGRAM

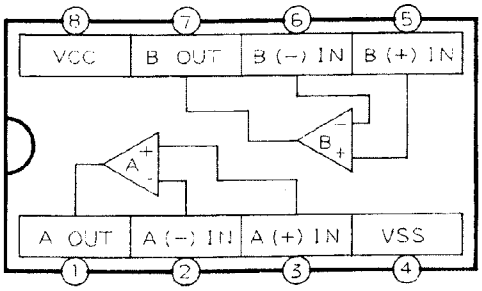
13.1. Main Block



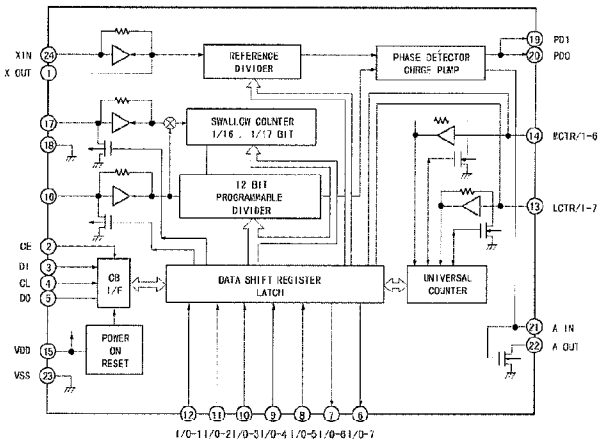
● PA51 : YEAU03A052C



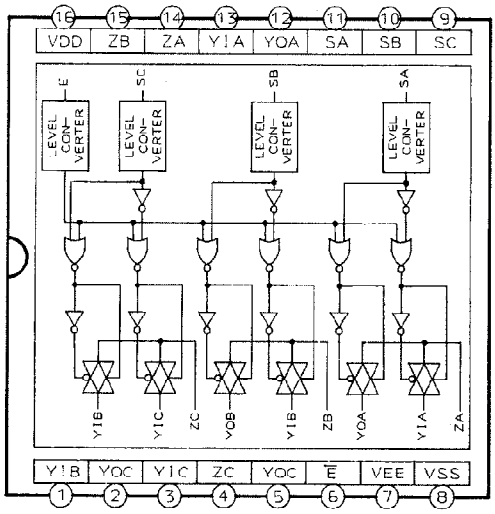
● IC201 YEAMEA6320TT



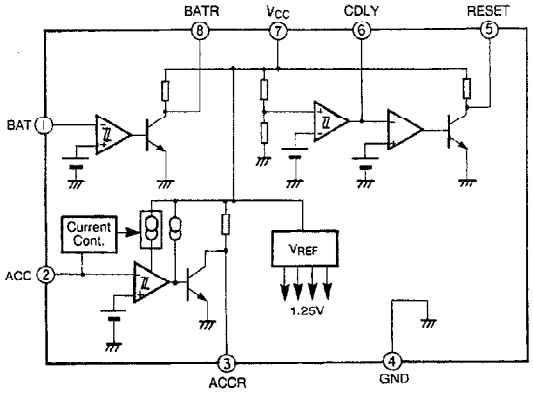
● IC203 YEAMPC4570T1



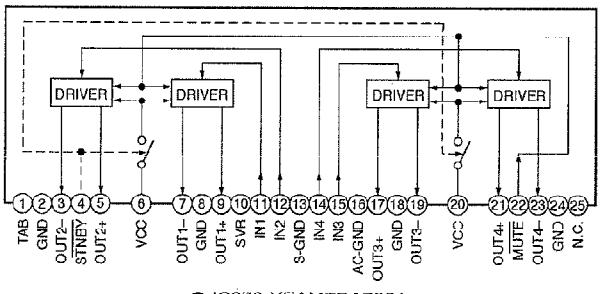
● IC400 YEAMLC72146T



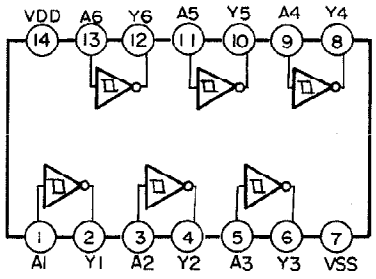
● IC204 : YEAMPD4053E2



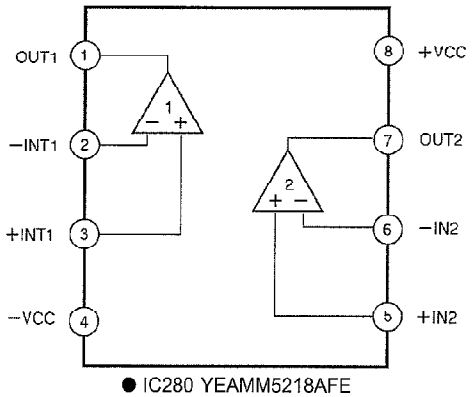
● IC601 AN8065SE1



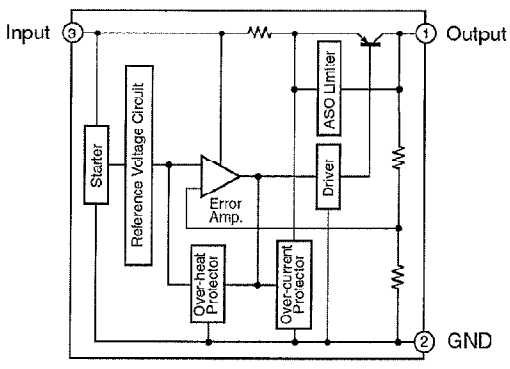
● IC270 YEAMTDA7384



● IC650 YEAMC14584BE

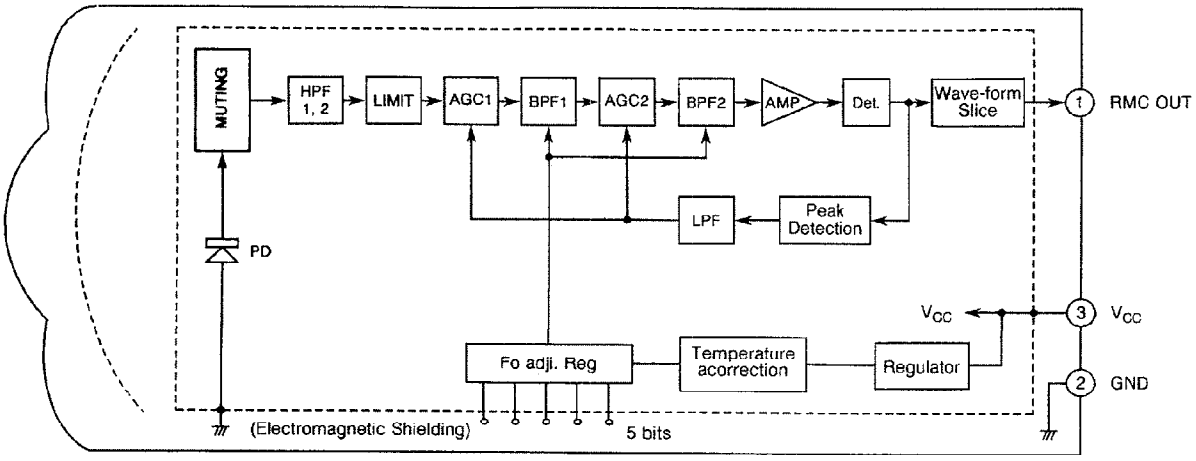


● IC280 YEAMM5218AFE



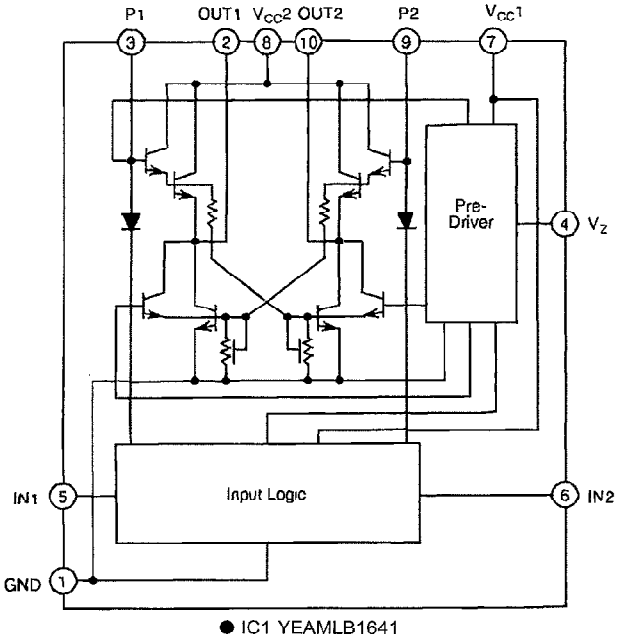
● IC705 AN8009M E1

13.2. Display Block

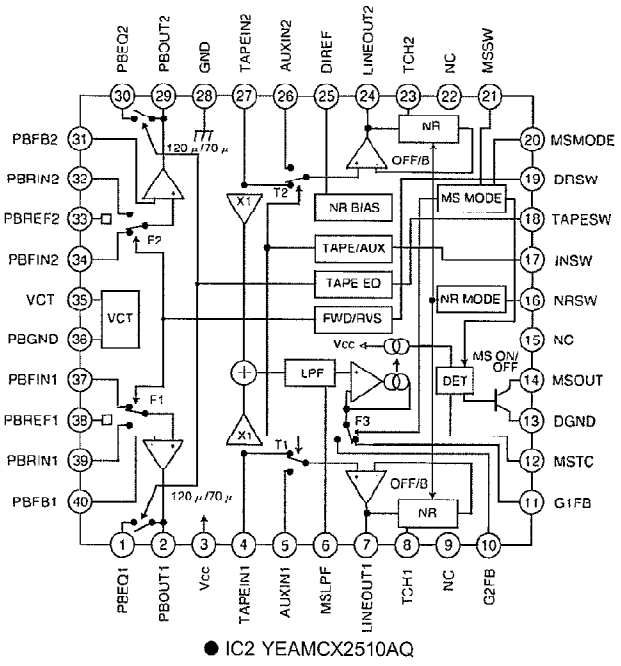


● IC902 YEAMSBX8035F

13.3. Tape Block



● IC1 YEAMLB1641



● IC2 YEAMCX2510AQ

14 REPLACEMENT PARTS LIST

Notes :

1. Be sure to make your orders of replacement parts according to this list.
2. Important safety notice: Components, identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Location keys in the remarks column indicates the general location of the parts shown in the exploded drawing, as in a road map.
4. The marking (RTL) indicates that Retention Time is limited for this item. After the discontinuation of assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Ref. No.	Part No.	Part Name & Description	Remarks
ICs AND TRANSISTORS			
MAIN BLOCK [E-6799A]			
IC201	YEAMEA6320TT	IC	
IC203	YEAMPC4570T1	IC	
IC204	YEAMPD4053E2	IC	
IC270	YEAMTDA7384	IC	
IC280	YEAMM5218AFE	IC	
IC400	YEAMLC72146T	IC	
IC600	C2BBGE000438	IC	
IC601	AN8065SE1	IC	
IC650	YEAMC14584BE	IC	
IC704	YEAMPC78M08A	IC	
IC705	AN8009M-E1	IC	
PA51	YEAU03A052C	Electronic Tuner	
Q51	YEANA114EKTX	Transistor	
Q230	YEANC323TKT	Transistor	
Q231	YEANC323TKT	Transistor	
Q330	YEANC323TKT	Transistor	
Q331	YEANC323TKT	Transistor	
Q400	YEANFP1F3PT1	Transistor	
Q401	YEAN2SK536TB	Transistor	
Q403	B1GBCFNN0005	Transistor	
Q647	YEANC144EUTX	Transistor	
Q660	YEANA114EKTX	Transistor	
Q661	YEANA114EUKT	Transistor	
Q701	YEAND1859T	Transistor	
Q703	YEANB1261ZT	Transistor	
Q704	YEANC143XKTX	Transistor	
Q705	2SD2139TA	Transistor	
Q709	YEANA114YKTX	Transistor	
Q710	YEAND1859T	Transistor	
DISPLAY BLOCK [E-8872]			
IC901	YEAMLC75854T	IC	
IC902	YEAMSBX8035F	IC	
Q901	YEANA114EKTX	Transistor	
DIODES			
MAIN BLOCK [E-6799Ae]			
D280	MA165TA	Diode	
D281	B0BA5R200005	Diode	
D380	MA165TA	Diode	
D381	B0BA5R200005	Diode	
D602	LN25RP	LED	
D701	YEADDAM3MA47	Diode	
D702	MA165TA	Diode	
D703	B0BA5R700006	Diode	
D704	MA723TA	Diode	
D705	MA165TA	Diode	
D707	MA736TX	Diode	
D708	YEADRD91M1T2	Diode	
DISPLAY BLOCK [E-8872]			
D901	MA8047MTX	Diode	
D902	MA8056LMHTX	Diode	
D903	MA8056LMHTX	Diode	
D904	MA8056LMHTX	Diode	
D905	MA8056LMHTX	Diode	
D906	LN1271RAL	LED	
D908	LNJ301MPUJA	LED	
D909	LNJ301MPUJA	LED	
CAPACITORS			
MAIN BLOCK [E-6799A]			
C51	ECA1CSA470I	Electrolytic,47MFD 16WV	
C52	YECUS1H103KX	Ceramic,0.01MFD 50WV	
C53	YECUS1E273KX	Ceramic,0.027MFD 25WV	
C54	YECUS1H560JM	Ceramic,56PF 50WV	
C55	YECUS1H103KX	Ceramic,0.01MFD 50WV	
C56	YECUS1E273KX	Ceramic,0.027MFD 25WV	
C57	YECUS1H102KX	Ceramic,0.001MFD 50WV	
C60	YECUS1H100DM	Ceramic,10PF 50WV	
C203	ECA1HSA3R3I	Electrolytic,3.3MFD 50WV	
C204	ECA1HSA3R3I	Electrolytic,3.3MFD 50WV	
C205	ECA1HSAR33I	Electrolytic,0.33MFD 50WV	
C207	YECUS1C224KX	Ceramic,0.22MFD 16WV	
C208	YECUS1E333KX	Ceramic,0.033MFD 25WV	
C209	YECUS1H562KX	Ceramic,0.0056MFD 50WV	
C210	ECA1CSA470I	Electrolytic,47MFD 16WV	
C211	YECUS1H103KX	Ceramic,0.01MFD 50WV	
C212	YECUS1H271JM	Ceramic,270PF 50WV	
C217	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C218	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C220	YECUS1H123KX	Ceramic,0.012MFD 50WV	
C221	ECA1HSA010I	Electrolytic,1MFD 50WV	
C223	ECA0JSA470I	Electrolytic,47MFD 6.3WV	
C230	ECA1CSA100I	Electrolytic,10MFD 16WV	
C231	ECA1CSA100I	Electrolytic,10MFD 16WV	
C240	ECEA1HKAR47I	Electrolytic,0.47MFD 50WV	
C241	ECEA1HKAR47I	Electrolytic,0.47MFD 50WV	
C249	YECUS1H122KX	Ceramic,0.0012MFD 50WV	
C250	YECUS1H122KX	Ceramic,0.0012MFD 50WV	
C251	YECUV1H101JM	Ceramic,100PF 50WV	
C252	YECUS1H101JM	Ceramic,100PF 50WV	
C253	YECUS1H101JM	Ceramic,100PF 50WV	
C254	YECUV1H101JM	Ceramic,100PF 50WV	
C278	ECEA1AKA470I	Electrolytic,47MFD 10WV	
C279	ECEA1HKA2R2I	Electrolytic,2.2MFD 50WV	
C280	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C281	YECUS1H102KX	Ceramic,0.001MFD 50WV	
C282	ECA0JSA220I	Electrolytic,22MFD 6.3WV	
C303	ECA1HSA3R3I	Electrolytic,3.3MFD 50WV	
C304	ECA1HSA3R3I	Electrolytic,3.3MFD 50WV	
C305	ECA1HSAR33I	Electrolytic,0.33MFD 50WV	
C307	YECUS1C224KX	Ceramic,0.22MFD 16WV	
C308	YECUS1E333KX	Ceramic,0.033MFD 25WV	
C309	YECUS1H562KX	Ceramic,0.0056MFD 50WV	
C310	ECA0JSA101I	Electrolytic,100MFD 6.3WV	
C311	ECA1CSA470I	Electrolytic,47MFD 16WV	
C312	YECUS1H271JM	Ceramic,270PF 50WV	
C317	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C318	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C320	YECUS1H123KX	Ceramic,0.012MFD 50WV	
C321	ECA1HSA010I	Electrolytic,1MFD 50WV	

Ref. No.	Part No.	Part Name & Description	Remarks
C323	ECA0JSA470I	Electrolytic,47MFD 6.3WV	
C330	ECA1CSA100I	Electrolytic,10MFD 16WV	
C331	ECA1CSA100I	Electrolytic,10MFD 16WV	
C340	ECEA1HKAR47I	Electrolytic,0.47MFD 50WV	
C341	ECEA1HKAR47I	Electrolytic,0.47MFD 50WV	
C349	YECUS1H122KX	Ceramic,0.0012MFD 50WV	
C350	YECUS1H122KX	Ceramic,0.0012MFD 50WV	
C351	YECUS1H101JM	Ceramic,100PF 50WV	
C352	YECUV1H101JM	Ceramic,100PF 50WV	
C353	YECUV1H101JM	Ceramic,100PF 50WV	
C354	YECUS1H101JM	Ceramic,100PF 50WV	
C380	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C381	YECUS1H102KX	Ceramic,0.001MFD 50WV	
C401	YECUS1H150JM	Ceramic,15PF 50WV	
C402	YECUS1H150JM	Ceramic,15PF 50WV	
C403	ECA0JSA101I	Electrolytic,100MFD 6.3WV	
C404	YECUS1H103KX	Ceramic,0.01MFD 50WV	
C408	YECUS1E223KX	Ceramic,0.022MFD 25WV	
C409	ECQV1H224JL2	Plastic Film,0.22MFD 50WV	
C410	YECUS1H103KX	Ceramic,0.01MFD 50WV	
C411	ECA1AM331I	Electrolytic,330MFD 10WV	
C413	YECUS1H101JM	Ceramic,100PF 50WV	
C417	ECA1AM331I	Electrolytic,330MFD 10WV	
C601	YECUS1H220JM	Ceramic,22PF 50WV	
C602	YECUS1H220JM	Ceramic,22PF 50WV	
C603	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C604	YECUS1H103KX	Ceramic,0.01MFD 50WV	
C606	ECEA0JKS331I	Electrolytic,330MFD 6.3WV	
C607	EECS5R5T473	Electrolytic,0.047FD 5.5WV	
C612	YECUV1H104ZF	Ceramic,0.1MFD 50WV	
C631	ECA1CSA100I	Electrolytic,10MFD 16WV	
C660	ECEA0JKA470I	Electrolytic,47MFD 6.3WV	
C661	YECUS1H103KX	Ceramic,0.01MFD 50WV	
C680	ECA1HSA010I	Electrolytic,1MFD 50WV	
C681	ECA1HSA010I	Electrolytic,1MFD 50WV	
C690	YECUS1H103KX	Ceramic,0.01MFD 50WV	
C702	ECEA0JKA470I	Electrolytic,47MFD 6.3WV	
C705	YECUS1C224KX	Ceramic,0.22MFD 16WV	
C706	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C707	ECA1AM221I	Electrolytic,220MFD 10WV	
C710	ECA1CM471B	Electrolytic,470MFD 16WV	
C715	YECUS1C224KX	Ceramic,0.22MFD 16WV	
C717	YECUS1C224KX	Ceramic,0.22MFD 16WV	
C720	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C721	ECSF1VE225B1	Tantalum, 2.2MFD 35WV	
C722	YECUS1C104KX	Ceramic,0.1MFD 16WV	
C723	ECEA0JKA470I	Electrolytic,47MFD 6.3WV	
C732	YECUS1E104ZF	Ceramic,0.1MFD 25WV	
C735	ECA1CDT472Y	Electrolytic,4700MFD 16WV	
C738	ECEA1HKA010I	Electrolytic,1MFD 50WV	
DISPLAY BLOCK [E-8872]			
C901	YECUS1E104ZF	Ceramic,0.1MFD 25WV	
C902	YECUS1E104ZF	Ceramic,0.1MFD 25WV	
C903	YECUS1H681JM	Ceramic,680PF 50WV	
C904	YECUS1E104ZF	Ceramic,0.1MFD 25WV	
C905	YECUS1E104ZF	Ceramic,0.1MFD 25WV	
C906	YECUS1H102KX	Ceramic,0.001MFD 50WV	
C912	YECUS1E104ZF	Ceramic,0.1MFD 25WV	
RESISTORS			
MAIN BLOCK [E-6799A]			
J501	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
J502	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
J503	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
J504	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
J505	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
J508	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
J510	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
J511	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
J513	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
J601	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
J604	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
J606	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
J607	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
J608	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
J610	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
J612	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
J613	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
R50	ERJ6GEYJ5R6	Chip, 5.6 ohms 1/10W	
R52	ERJ8GEYJ101V	Chip, 100 ohms 1/8W	
R53	ERJ8GEYJ431V	Chip, 430 ohms 1/8W	
R54	ERD25TJ223	Carbon, 22k ohms 1/4W	
R55	ERD25TJ223	Carbon, 22k ohms 1/4W	
R58	ERJ6GEYJ393	Chip, 39k ohms 1/10W	
R201	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
R202	ERJ6GEYJ332	Chip, 3.3k ohms 1/10W	
R204	ERD25TJ123	Carbon, 12k ohms 1/4W	
R205	ERJ6GEYJ822	Chip, 8.2k ohms 1/10W	
R209	ERJ6GEYJ472	Chip, 4.7k ohms 1/10W	
R211	ERJ6GEYJ123	Chip, 12k ohms 1/10W	
R212	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R213	ERJ6GEYJ183	Chip, 18k ohms 1/10W	
R214	ERJ6GEYJ752	Chip, 7.5k ohms 1/10W	
R215	ERJ6GEYJ272	Chip, 2.7k ohms 1/10W	
R216	ERJ6GEYJ682	Chip, 6.8k ohms 1/10W	
R217	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R218	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R230	ERD25TJ101	Carbon, 100 ohms 1/4W	
R235	ERD25TJ101	Carbon, 100 ohms 1/4W	
R236	ERJ6GEYJ561	Chip, 560 ohms 1/10W	
R241	ERJ6GEYJ472	Chip, 4.7k ohms 1/10W	
R243	ERJ6GEYJ472	Chip, 4.7k ohms 1/10W	
R280	ERJ6GEYJ104	Chip, 100k ohms 1/10W	
R281	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R282	ERJ6GEYJ472	Chip, 4.7k ohms 1/10W	
R283	ERJ6GEYJ123	Chip, 12k ohms 1/10W	
R284	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R285	ERJ6GEYJ563	Chip, 56k ohms 1/10W	
R286	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R301	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
R302	ERJ6GEYJ332	Chip, 3.3k ohms 1/10W	
R304	ERD25TJ123	Carbon, 12k ohms 1/4W	
R305	ERJ6GEYJ822	Chip, 8.2k ohms 1/10W	
R309	ERJ6GEYJ472	Chip, 4.7k ohms 1/10W	
R311	ERJ6GEYJ123	Chip, 12k ohms 1/10W	
R312	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R313	ERJ6GEYJ183	Chip, 18k ohms 1/10W	
R314	ERJ6GEYJ752	Chip, 7.5k ohms 1/10W	
R315	ERJ6GEYJ272	Chip, 2.7k ohms 1/10W	
R316	ERJ6GEYJ682	Chip, 6.8k ohms 1/10W	
R317	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R318	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R330	ERD25TJ101	Carbon, 100 ohms 1/4W	
R335	ERD25TJ101	Carbon, 100 ohms 1/4W	
R336	ERJ6GEYJ561	Chip, 560 ohms 1/10W	
R341	ERJ6GEYJ472	Chip, 4.7k ohms 1/10W	
R343	ERJ6GEYJ472	Chip, 4.7k ohms 1/10W	
R380	ERJ6GEYJ104	Chip, 100k ohms 1/10W	
R381	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R382	ERJ6GEYJ472	Chip, 4.7k ohms 1/10W	
R383	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R384	ERJ6GEYJ123	Chip, 12k ohms 1/10W	
R385	ERJ6GEYJ563	Chip, 56k ohms 1/10W	
R386	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R387	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
R401	ERJ6GEYJ152	Chip, 1.5k ohms 1/10W	
R402	ERJ6GEYJ222	Chip, 2.2k ohms 1/10W	
R406	ERJ6GEYJ182	Chip, 1.8k ohms 1/10W	
R407	ERJ6GEYJ561	Chip, 560 ohms 1/10W	
R409	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R601	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R603	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R605	ERJ6GEYJ473	Chip, 47k ohms 1/10W	

CQ-R235U

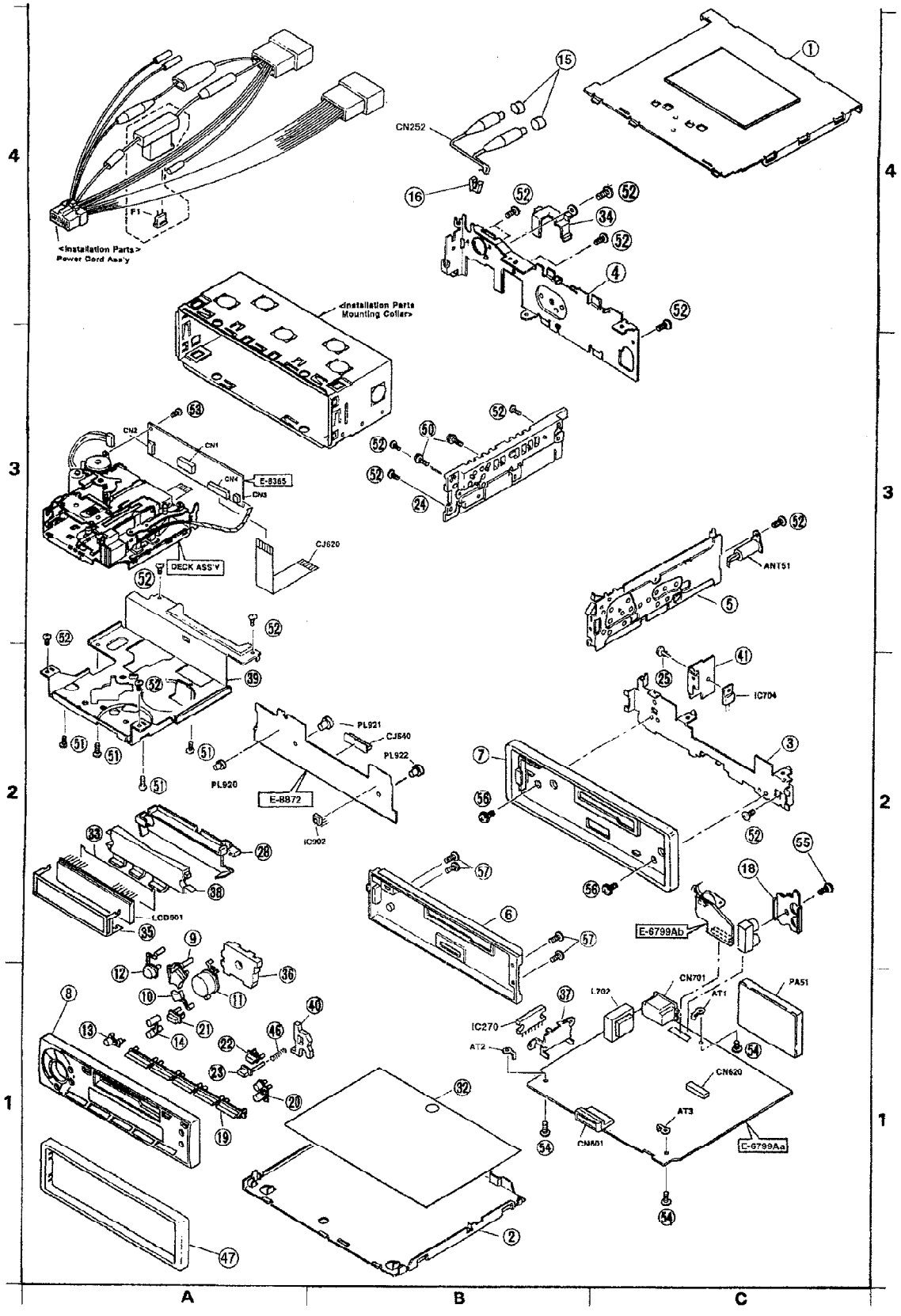
Ref. No.	Part No.	Part Name & Description	Remarks
R607	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R608	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R609	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R610	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R611	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R614	ERDS2TJ681	Carbon, 680 ohms 1/4W	
R615	ERDS2TJ100	Carbon, 10 ohms 1/4W	
R616	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R617	ERDS2TJ102	Carbon, 1k ohms 1/4W	
R618	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R619	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R620	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R621	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R622	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R623	ERJ6GEYJ184	Chip, 180k ohms 1/10W	
R626	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R629	ERD25TJ102	Carbon, 1k ohms 1/4W	
R630	ERD25TJ102	Carbon, 1k ohms 1/4W	
R631	ERD25TJ102	Carbon, 1k ohms 1/4W	
R635	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R636	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R637	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R638	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R639	ERJ6GEYJ184	Chip, 180k ohms 1/10W	
R644	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R647	ERJ8GEYJ682V	Chip, 6.8k ohms 1/8W	
R648	ERJ6GEYJ223	Chip, 22k ohms 1/10W	
R650	ERJ6GEYJ104	Chip, 100k ohms 1/10W	
R651	ERJ8GEYJ104V	Chip, 100k ohms 1/8W	
R652	ERJ8GEYJ104V	Chip, 100k ohms 1/8W	
R653	ERDS2TJ102	Carbon, 1k ohms 1/4W	
R654	ERDS2TJ102	Carbon, 1k ohms 1/4W	
R655	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
R656	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R660	ERJ6GEYJ222	Chip, 2.2k ohms 1/10W	
R661	ERJ6GEYJ122	Chip, 1.2k ohms 1/10W	
R671	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R672	ERDS2TJ102	Carbon, 1k ohms 1/4W	
R673	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R674	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R675	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R676	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R677	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R678	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R679	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R680	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R681	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R682	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R684	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R685	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R686	ERJ6GEYJ822	Chip, 8.2k ohms 1/10W	
R690	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R691	ERJ6GEYJ333	Chip, 33k ohms 1/10W	
R692	ERJ6GEYJ104	Chip, 100k ohms 1/10W	
R693	ERDS2TJ102	Carbon, 1k ohms 1/4W	
R694	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R695	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R701	ERDS2FJ470	Carbon, 47 ohms 1/4W	
R702	ERDS2FJ470	Carbon, 47 ohms 1/4W	
R703	ERJ6GEYJ682	Chip, 6.8k ohms 1/10W	
R704	ERJ6GEYJ274	Chip, 270k ohms 1/10W	
R705	ERJ6GEYJ433	Chip, 43k ohms 1/10W	
R706	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R707	ERJ6GEYJ274	Chip, 270k ohms 1/10W	
R708	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R709	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R710	ERDS1FJ331	Carbon, 330 ohms 1/2W	
R711	ERDS1FJ331	Carbon, 330 ohms 1/2W	
R712	ERD25FJ1R0	Carbon, 1 ohms 1/4W	
R713	ERD25FJ1R0	Carbon, 1 ohms 1/4W	
R714	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R717	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
R718	ERJ6GEYJ473	Chip, 47k ohms 1/10W	

Ref. No.	Part No.	Part Name & Description	Remarks
R719	ERDS1FJ820	Carbon, 82 ohms 1/2W	
R720	ERDS2TJ103	Carbon, 10k ohms 1/4W	
R721	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R722	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R723	ERJ6GEYJ222	Chip, 2.2k ohms 1/10W	
R727	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R728	ERJ8GEY0R00V	Chip, 0 ohms 1/8W	
R729	ERD25TJ101	Carbon, 100 ohms 1/4W	
DISPLAY BLOCK [E-8872]			
R901	ERJ6GEYJ4R7	Chip, 4.7 ohms 1/10W	
R902	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R903	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R904	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R905	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R906	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R908	ERJ6GEYJ182	Chip, 1.8k ohms 1/10W	
R909	ERJ6GEYJ4R7	Chip, 4.7 ohms 1/10W	
R910	ERJ6GEYJ473	Chip, 47k ohms 1/10W	
R911	ERJ6GEYJ103	Chip, 10k ohms 1/10W	
R912	ERJ6GEYJ102	Chip, 1k ohms 1/10W	
R914	ERJ6GEYJ152	Chip, 1.5k ohms 1/10W	
R915	ERJ6GEYJ681	Chip, 680 ohms 1/10W	
R926	ERJ6GEY0R00V	Chip, 0 ohms 1/10W	
R927	ERJ8GEYJ6R8V	Chip, 6.8 ohms 1/8W	
R928	ERJ6GEYJ6R8V	Chip, 6.8 ohms 1/10W	
CONNECTORS			
CN200	YEAE02165	Connector, 2P RCA	
CN252	YEAE012709	Connector, 2P RCA	
CN601	YEAE012475	Connector, 12P	
CN620	YEAE012659	Connector, 22P	
CN681	YEAE012307	Connector, 8P DIN	
CN701	YEAE012194	Connector, 16P	
CJ640	YEAE012476	Connector, 12P	
ELECTRIC PARTS			
SWITCHES			
SW901	EVQPJH05K	Switch	
SW902	EVQPJH05K	Switch	
SW903	EVQPJH05K	Switch	
SW904	YEAS09312	Switch	
SW905	EVQPJH05K	Switch	
SW906	EVQPJH05K	Switch	
SW907	EVQPJH05K	Switch	
SW908	YEAS09312	Switch	
SW909	EVQPJH05K	Switch	
SW910	EVQPJH05K	Switch	
SW911	EVQPJH05K	Switch	
SW912	EVQPJH05K	Switch	
SW913	YEAS09312	Switch	
SW914	EVQPJH05K	Switch	
SW915	YEAS09312	Switch	
SW916	YEAS09312	Switch	
SW917	YEAS09312	Switch	
SW918	YEAS09312	Switch	
SW919	YEAS09312	Switch	
SW920	EVQPJH05K	Switch	
SW921	EVQPJH05K	Switch	
SW922	EVQPJH05K	Switch	
SW923	EVQPJH05K	Switch	
SW926	EVQPJH05K	Switch	
CRYSTALS			
XL400	YEXL49U072TA	Crystal OSC	
XL600	YEXL49U0419T	Crystal OSC	
COILS			
BPF50	YEXC07T009	Coil	

Ref. No.	Part No.	Part Name & Description	Remarks
L50	YELT02M330KT	Coil	
L400	YELT02C101KT	Coil	
L600	YELT02C470KT	Coil	
L702	YETQ026F143	Coil	
LCD			
LCD901	L5ACCJB00001	LCD	
LAMPS			
PL920	YEALHSKB001	Pilot Lamp	
PL921	YEALHSLG002	Pilot Lamp	
PL922	YEALHSLG002	Pilot Lamp	
Z50	J0LE00000002	None Tube	
THERMISTORS			
PT701	YERT7AR4R7MT	Thermistor	
ACCESSORIES			
PRINTING			
	YEFM283538	Operating Instructions	
INSTALLATION PARTS			
	YEAJ02765	Power Cord	
	YEFA131302	Detachable Unit Case	
	YEFG04019	Rear Support Strap	
	YEFX0214198	Mounting Collar	
	YEFX9991721	Unlock Key	
MECHANICAL PARTS			
MISCELLANEOUS			
F1	YEAF02015	Fuse, 15A	⚠
ANT51	YGAA10082	Antenna Receptacle	
AT1	K4ZZ01000048	Terminal	
AT2	K4ZZ01000048	Terminal	
AT3	K4ZZ01000048	Terminal	
CJ620	YEAES22B100B	Connector, 22P flexible	
1	YEFA031354E	Upper Cover	(4-C)
2	YEFA05594B	Bottom Cover	(1-B)
3	YEFA07394	Front Plate	(2-C)
4	YEFA08404BK	Rear Plate	(4-C)
5	YEFA09508	Side Plate	(3-C)
6	YEFA131511	Cover, Detachable	(2-B)
7	YEFC026830	Escutcheon Ass'y, Unit	(2-B)
8	YEFC026856	Escutcheon Ass'y, Detachable	(1-A)
9	YEFB136132	Button, VOL UP	(2-A)
10	YEFE136133	Button, VOL DOWN	(1-A)
11	YEFE136134	Button, MODE/BAND	(1-A)
12	YEFE136135	Button, SEL	(1-A)
13	YEFE136136	Button, PWR	(1-A)
14	YEFE136076	Button, M/S	(1-A)
15	YEFR04187	Lead Cap	(4-B)
16	YEFX007380	Cord Clamper	(4-B)
18	YEFX0213673	Bracket, RCA	(2-C)
19	YEFE136117	Button, PRESET	(1-A)
20	YEFE136075	Button, DISP/.	(1-A)
21	YEFE136072	Button, PROG	(1-A)
22	YEFE136073	Button, EJECT	(1-A)
23	YEFE136131	Button, RLSE	(1-A)
24	YEFF01829C	Heat Sink	(3-B)
25	YEFJ05046	Color Rivet	(2-C)
28	YEFK06917	Holder, LCD	(2-A)
32	YEFV011813	Insulator	(1-B)
33	YEFV021718	Optical Shade	(2-A)
34	YEFX0213649A	Bracket, CN701	(4-C)
35	YEFX0214956	Bracket, LCD	(2-A)
36	YEFX0012051	Transparent Plate	(1-A)
37	YEFX0213945B	Bracket, IC270	(1-B)
38	YEFX0012063	Transparent Plate	(2-A)
39	YEFX0214197B	Bracket, Deck	(2-A)

Ref. No.	Part No.	Part Name & Description	Remarks
40	YEFX0012044	Transparent Plate	(1-A)
41	YEFX0214167	Bracket, IC704	(2-C)
46	YEFX0052506	Spring	(1-A)
47	YEFC05554	Trim Plate	(1-A)
50	YEJS06092	Screw,3mm * 10mm	(3-B)
51	YEJS03022	Screw,3mm * 3mm	(2-A)
52	XTB3+6FFX	Tapping Screw, 3mm * 6mm	
53	YEJT03163	Tapping Screw, 2mm * 6mm	(3-A)
54	YEJT03009	Tapping Screw, 3mm * 8mm	
55	XTB3+8GFX	Tapping Screw, 3mm * 8mm	(2-C)
56	YGJT03156	Tapping Screw, 2.6mm * 5mm	(2-B)
57	XTN2+8GFZ	Tapping Screw, 2mm * 8mm	(2-B)

15 EXPLODED VIEW (Unit)



16 TAPE PLAYER PARTS

16.1. ICs and Transistors

[E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
IC1	YEAMLB1641	IC	
IC2	YEAMCX2510AQ	IC	
Q1	YEANB1237QRT	Transistor	
Q2	YEANC113ZKTX	Transistor	
Q3	YEANC113ZKTX	Transistor	
Q4	YEANC113ZKTX	Transistor	

16.2. Diodes

[E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
D1	YEAD11ES2	Diode	
D2	YEADRD43EST1	Diode	

16.3. Capacitors

[E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
C1	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C2	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C3	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C4	YECUS1H103KX	Ceramic, 0.01µF 50WV	
C5	ECEA1AKS330I	Electrolytic, 33µF 10WV	
C6	ECEA1CKS470I	Electrolytic, 47µF 16WV	
C7	ECEA1CKS470I	Electrolytic, 47µF 16WV	
C8	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C9	ECEA1HKS2R2I	Electrolytic, 2.2µF 50WV	
C10	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C11	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C12	YECUS1C104KX	Ceramic, 0.1µF 16WV	
C15	YECUS1E223KX	Ceramic, 0.022µF 25WV	
C16	YECUS1C224KX	Ceramic, 0.22µF 16WV	
C17	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C18	ECEA1CKS100I	Electrolytic, 10µF 16WV	
C19	YECUS1H391JM	Ceramic, 390PF 50WV	
C20	YECUS1H391JM	Ceramic, 390PF 50WV	
C21	YECUS1H391JM	Ceramic, 390PF 50WV	
C22	YECUS1H391JM	Ceramic, 390PF 50WV	
C24	YECUS1H822KX	Ceramic, 0.0082µF 50WV	

16.4. Resistors

[E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
J101	ERJ0GEY0R00V	Chip, 0Ω 1/0W	
J102	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J103	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J104	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J105	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J106	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J107	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J108	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J109	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J110	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J111	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J112	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J113	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J114	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J115	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J116	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J117	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J118	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J119	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J120	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J121	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J122	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J123	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J124	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J125	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
J126	ERJ8GEY0R00V	Chip, 0Ω 1/8W	
R1	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R2	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R3	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R4	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R5	ERJ6GEYJ683	Chip, 68kΩ 1/10W	
R6	ERJ6GEYJ271	Chip, 270Ω 1/10W	
R7	ERJ6GEYJ271	Chip, 270Ω 1/10W	
R8	ERJ6GEYJ104	Chip, 100kΩ 1/10W	
R9	ERJ6GEYJ392	Chip, 3.9kΩ 1/10W	
R12	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R13	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R14	ERJ8GEYJ103V	Chip, 10kΩ 1/8W	
R15	ERJ8GEYJ222V	Chip, 2.2kΩ 1/8W	
R17	ERJ6GEYJ223	Chip, 22kΩ 1/10W	
R18	ERG1SJ100	Metal Oxid, 10Ω 1W	
R19	ERJ6GEYJ121	Chip, 120Ω 1/10W	
R22	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R23	ERJ6GEYJ473	Chip, 47kΩ 1/10W	
R24	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R25	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R26	ERJ6GEYJ183	Chip, 18kΩ 1/10W	
R27	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R28	ERJ6GEYJ123	Chip, 12kΩ 1/10W	
R29	ERJ6GEYJ334	Chip, 330kΩ 1/10W	
R30	ERJ6GEYJ334	Chip, 330kΩ 1/10W	
R31	ERJ8GEYJ152V	Chip, 1.5kΩ 1/8W	
R33	ERJ8GEYJ101V	Chip, 100Ω 1/8W	

16.5. Connectors

[E8365]

Ref. No.	Part No.	Part Name & Description	Remarks
CN1	YEAE5597A09	Connector, 9P	
CN2	YEAE5325404	Connector, 4P	
CN3	YEAE012684	Connector, 5P	
CN4	YEAE012659	Connector, 22P	

16.6. Electric Parts

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW1	YEAS08031B62	Switch	

VARIABLE RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
VR1	EVNDCAA03BQ2	Variablr resistor	
VR2	EVNDCAA03BQ2	Variablr resistor	

OTHER

Ref. No.	Part No.	Part Name & Description	Remarks
TP201	YEAT03240	Terminal	
TP301	YEAT03240	Terminal	

16.7. Mechanical Parts

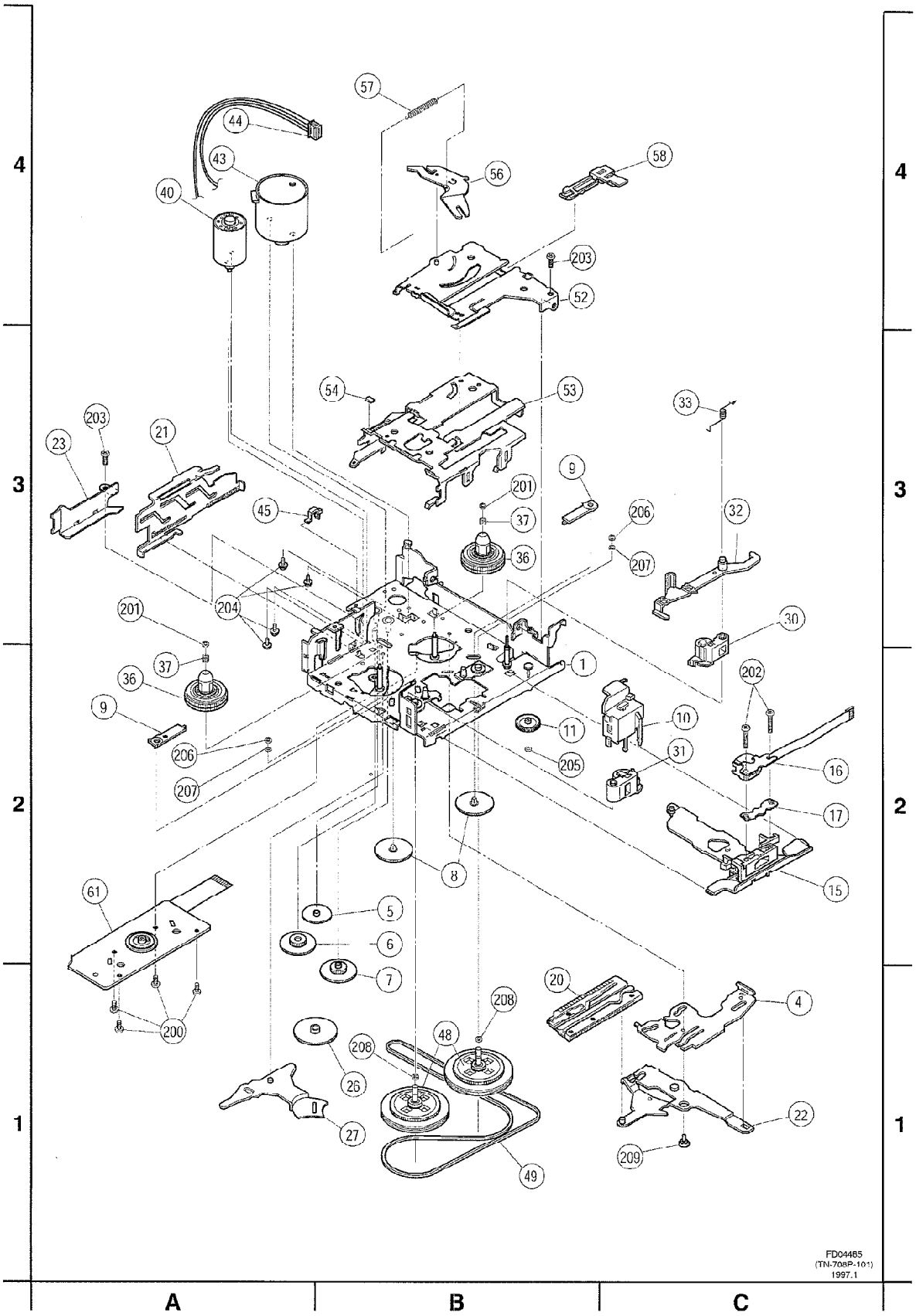
MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
1	YESFA01055	Chassis Rivet Ass'y	(2-B)
4	YESFX046056	Main Plate	(1-C)
5	YESFX003049	B Gear	(2-B)
6	YESFX003050	C Gear	(2-A)

CQ-R235U

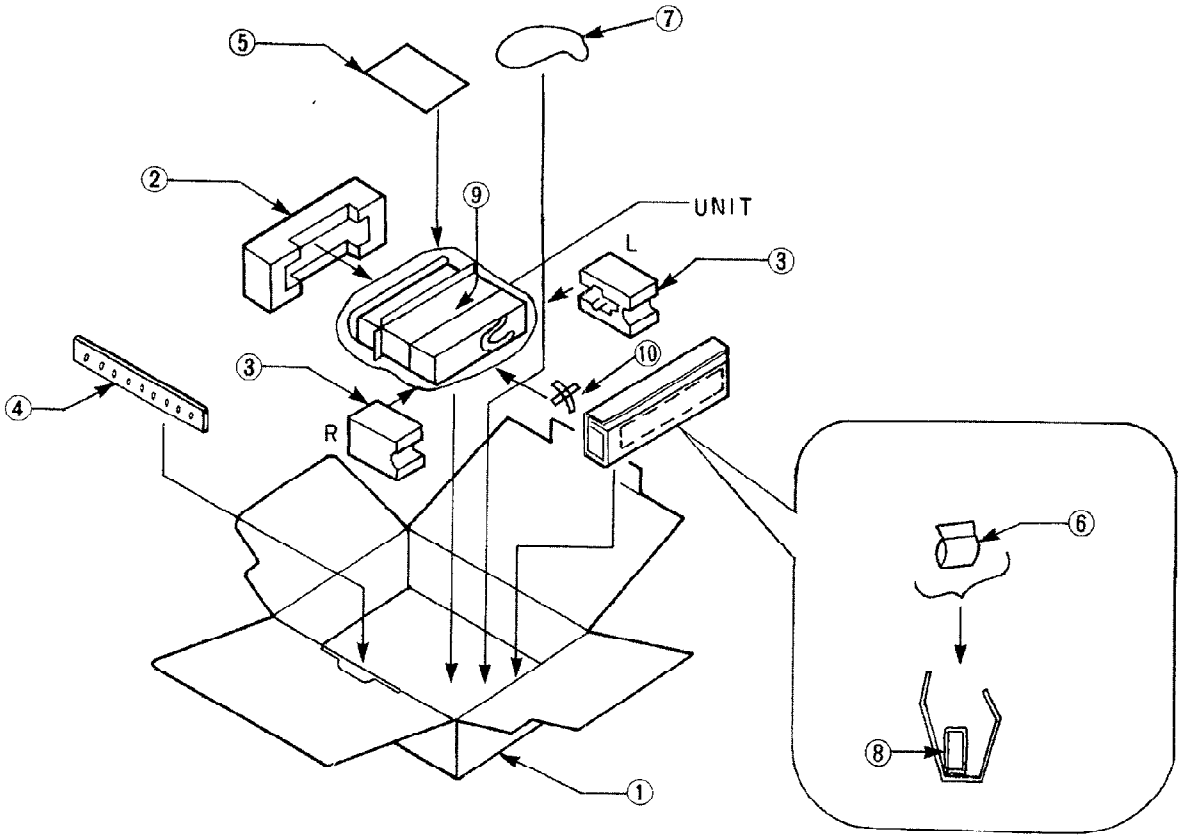
Ref. No.	Part No.	Part Name & Description	Remarks
7	YESFX003051	D Gear	(1-B)
8	YESFX003052	P Gear	(2-B)
9	YESFX003053	P.G Plate	(2-A) (3-B)
10	YESFG02021	Guide BKT	(2-C)
11	YESFX026013	Middle Pulley	(2-B)
15	YESFX046057	Head Panel Ass´y	(2-C)
16	YESAH006	P.Head P-5544SD-9949	(2-C)
17	YESFX046058	Head SP Plate	(2-C)
20	YESFX046059	O.P Plate Ass´y	(1-B)
21	YESFX215015	Eject Lever Rivet Ass´y	(3-A)
22	YESFX046060	S.B Plate Rivet Ass´y	(1-C)
23	YESFX046061	O.P Plate Holder	(3-A)
26	YESFX003054	FR Gear	(1-B)
27	YESFX046062	FR Plate	(1-A)
30	YESFX218011	Pinch Roller Arm (F) Ass´y	(3-C)
31	YESFX218012	Pinch Roller Arm (R) Ass´y	(2-C)
32	YESFX046063	SW Actuator B	(3-C)
33	YESFX005088	SA Spring M	(3-C)
36	YESFX209007	Reel Ass´y	(2-A) (3-B)
37	YESFX005074	B.Tension Spring (F)	(2-A) (3-B)
40	YESAK01013	Sub Motor Ass´y	(4-A)
43	YESAK01014	Main Motor Ass´y	(4-A)
44	YESAE283	M Conector Ass´y	(4-A)
45	YESFX006002	Wire Clamper	(3-A)
48	YESFX213004	FL Capstan Ass´y	(1-B)
49	YEFSFR03003	Main Belt	(1-B)
52	YESFX046064	Case Lifter	(4-B)
53	YESFX239006	Cassette Case	(3-B)
54	YESFS04007	Cusion Rubber	(3-B)
56	YESFX046065	P.S Actuator Plate	(4-B)
57	YESFX005075	P.S Spring	(4-B)
58	YESFX046066	Pack Slider	(4-B)
61	YESAP151	Reel PWB Ass´y	(2-A)
200	YESJS01090	Camera Screw (Tams) 2.0~2.2	(1-A)
201	YESJW01019	Lumilar Washer (Cut) 1.55~3.5~0.5	(3-A) (3-B)
202	YEJS01070	Adjust Screw 2.0~13	(2-C)
203	YEFT03084	Camera Tapping Screw S 2.0~3.0	(3-A) (4-B)
204	YEJS06130	Tams Screw 2.0~3.0	(3-A)
205	YEJW05130	P.Washer (Cut) 0.85~2.8~0.25	(2-B)
206	YESJW01012	P.Washer (Cut) 1.55~3.5~0.5	(2-A) (3-C)
207	YESJW01013	P.Washer 2.1~3.5~0.2	(2-A) (3-C)
208	YESJW01014	Lumilar Washer 2.1~3.5~0.1	(1-B)
209	YESJS01091	PK Collar Screw A	(1-C)

17 EXPLODED VIEW (Tape Deck)



CQ-R235U

18 PACKING PARTS LIST

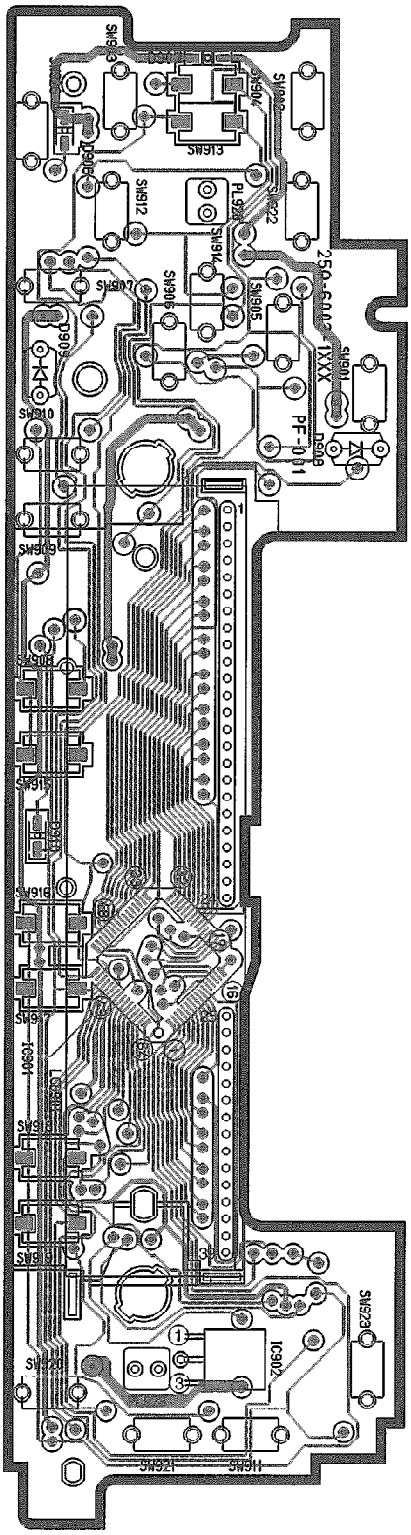


● Item numbers listed below should not order regular spare parts. **(not available)**

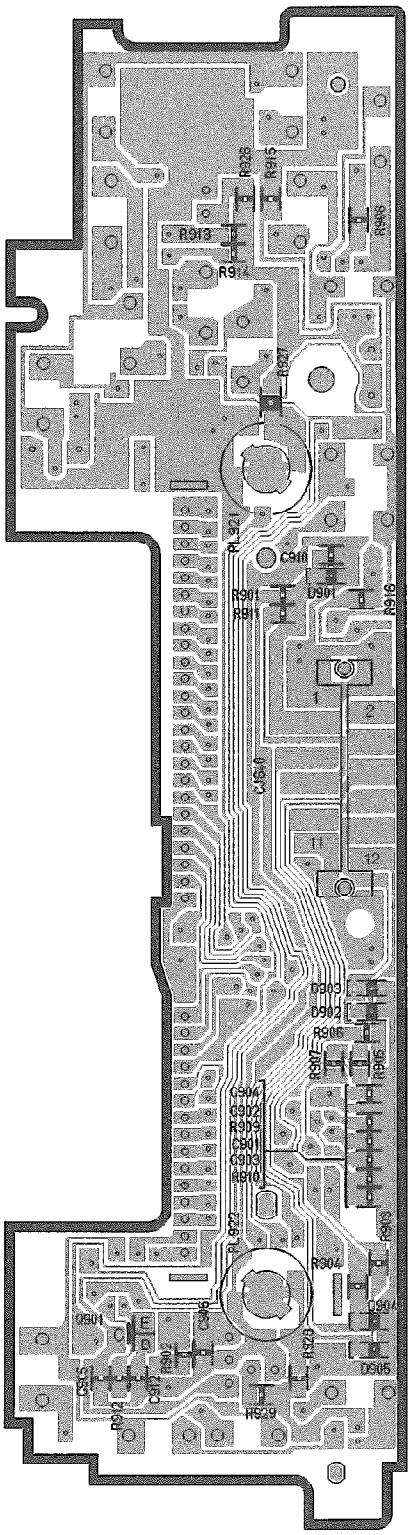
Item No.	Parts No.	Parts Name & Description	Q'ty	Remarks
1	-	Inner Carton	1	Not available
2	-	Paking Pad Front	1	Not available
3	-	Paking Pad Rihgt and Left	1	Not available
4	YEFG04019	Rear Support Strap	1	
5	-	Operating Instructions Kit	1	Not available
	YGFM283538	Operating Instructions	(1)	
	-	Warranty Card	(3)	Not available
	-	Servicenter List	(2)	Not available
6	YGP9FZ2714	Screws Kit	1	
7	YEAJ02783	Power Connector	1	
8	YEFA131290	Romovablc face Plate Case	1	
9	YEFX0214198	Mounting Collar	1	
10	YEFX9991721	Unlock Key	1	

19 WIRING DIAGRAM

19.1. Display Block

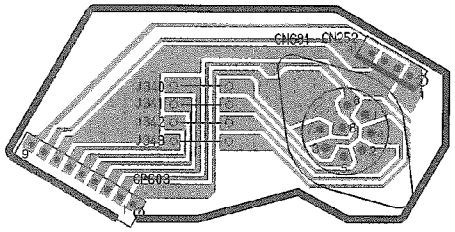


[E-8872]
[Top View]

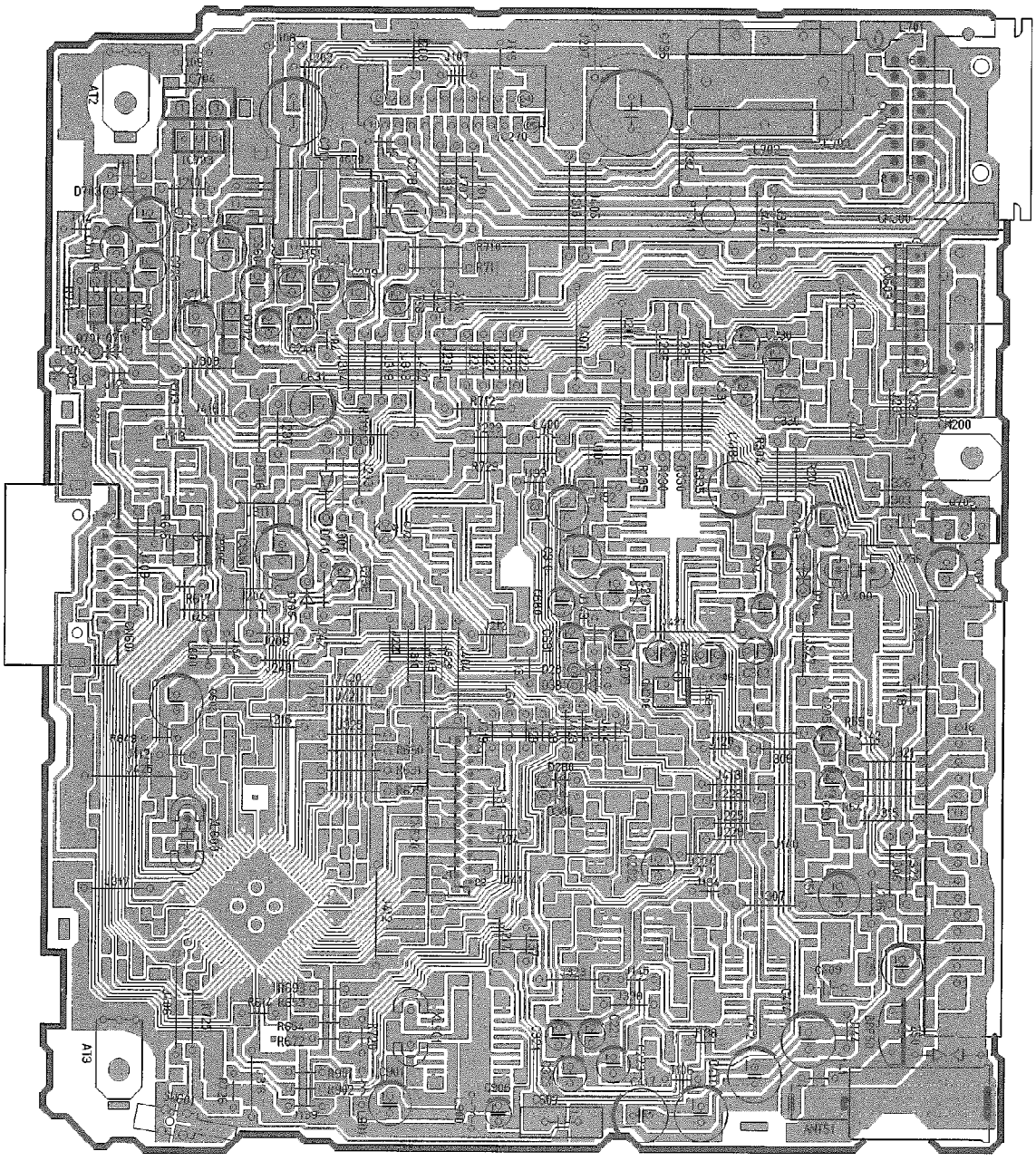


[E-8872]
[Bottom View]

19.2. Main Block -1 (Top View)

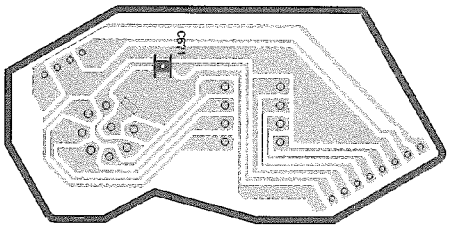


[E-6799Ab][Top View]

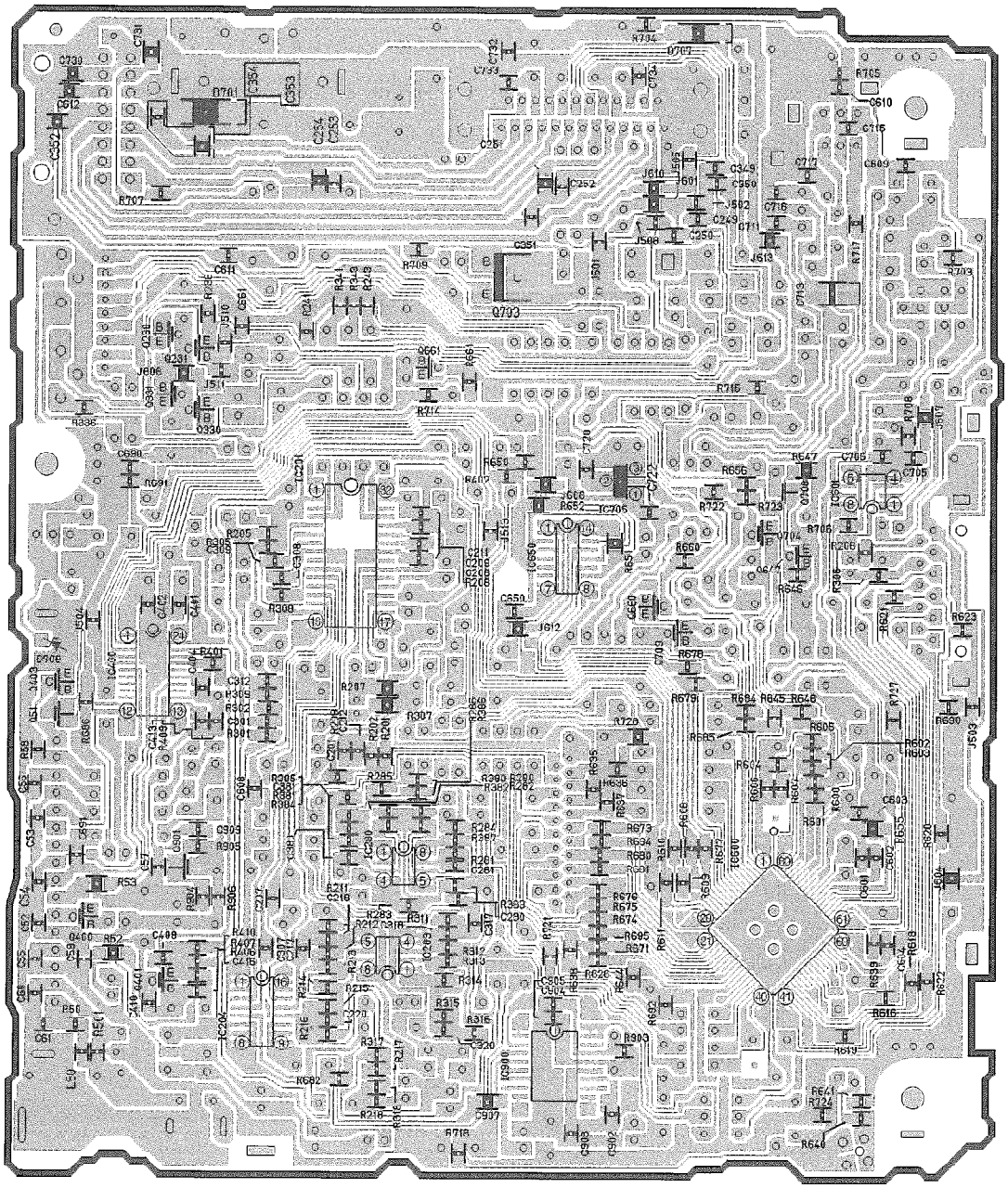


[E-6799Aa][Top View]

19.3. Main Block -2 (Bottom View)

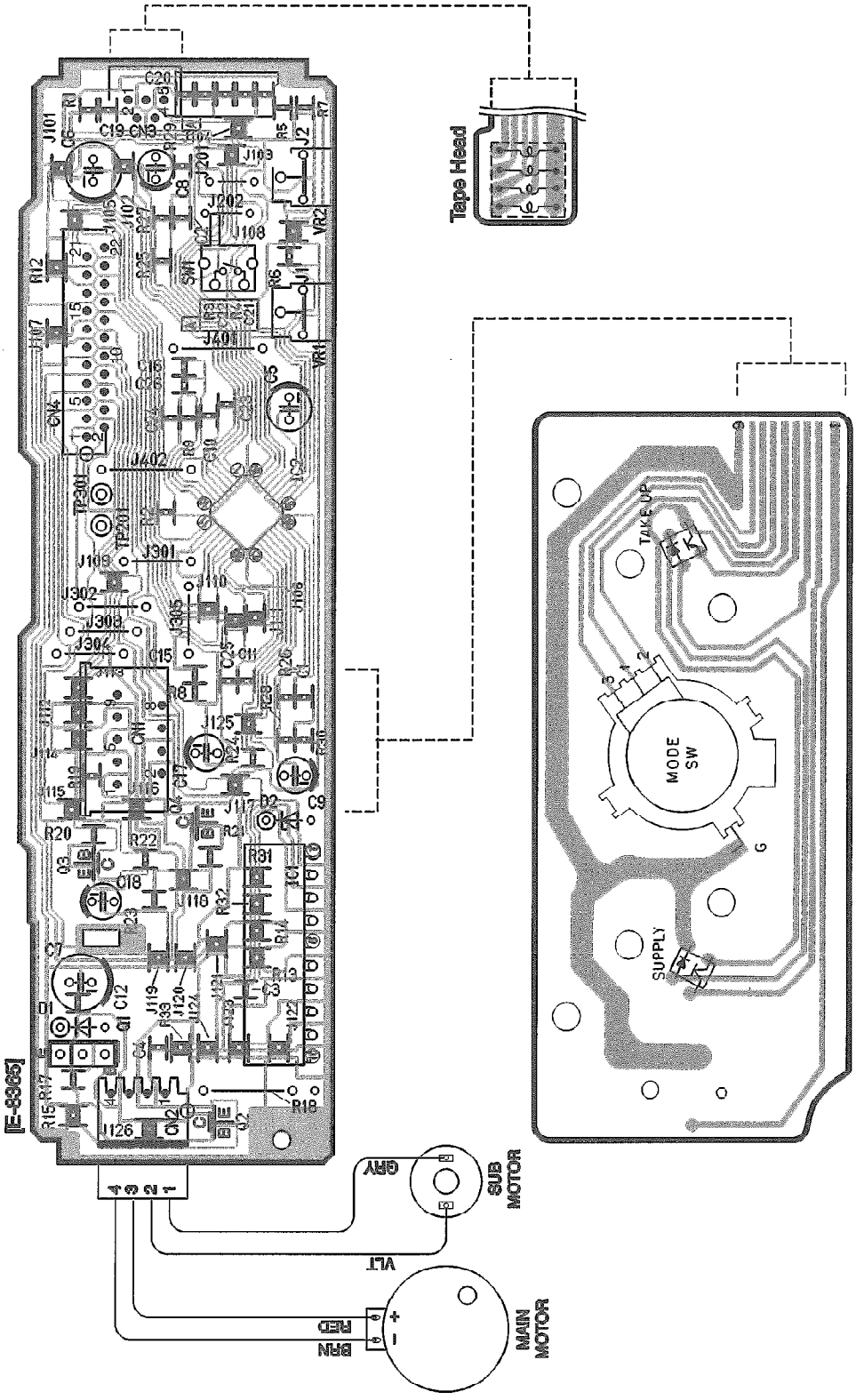


[E-6799Ab][Bottom View]



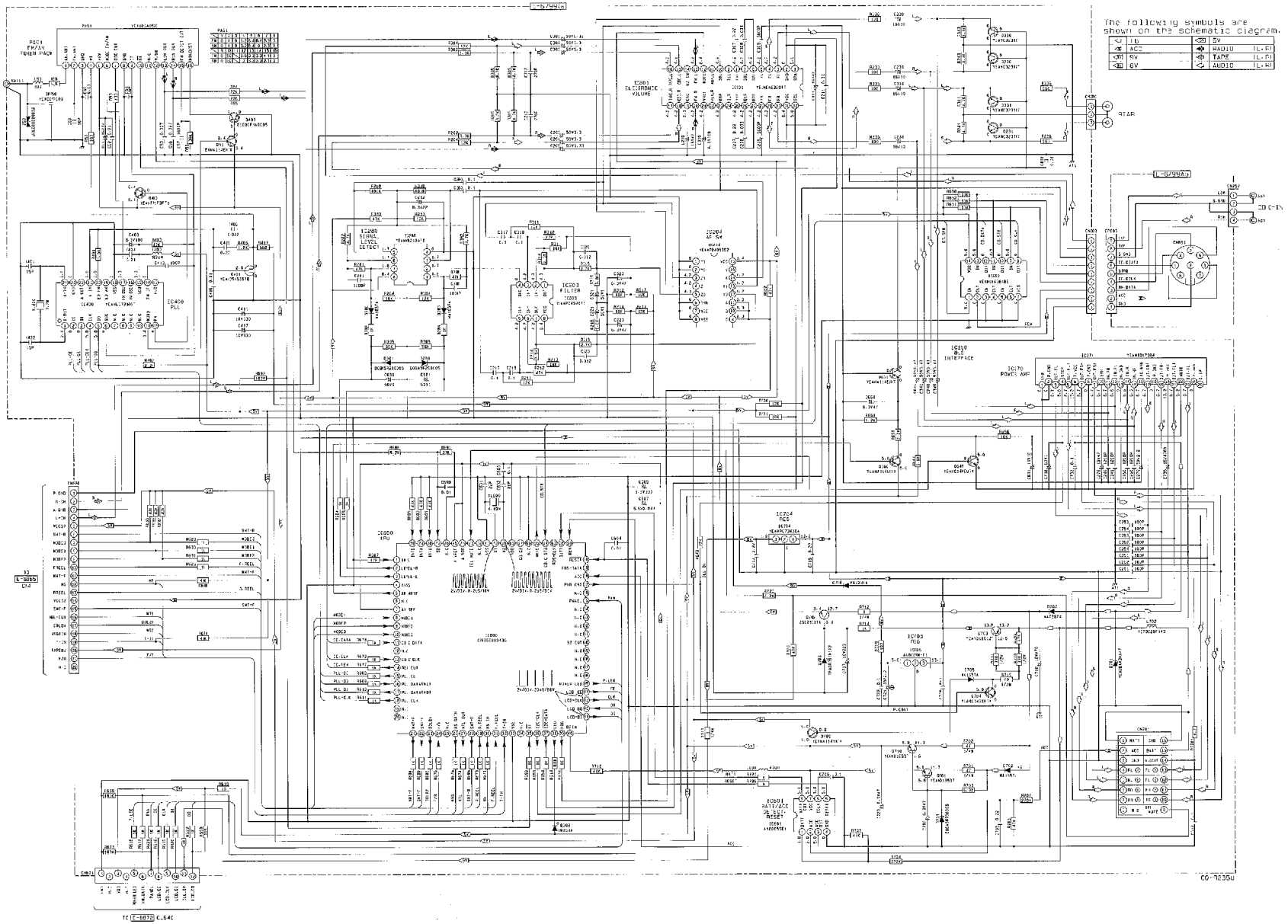
[E-6799Aa][Bottom View]

19.4. Tape Block

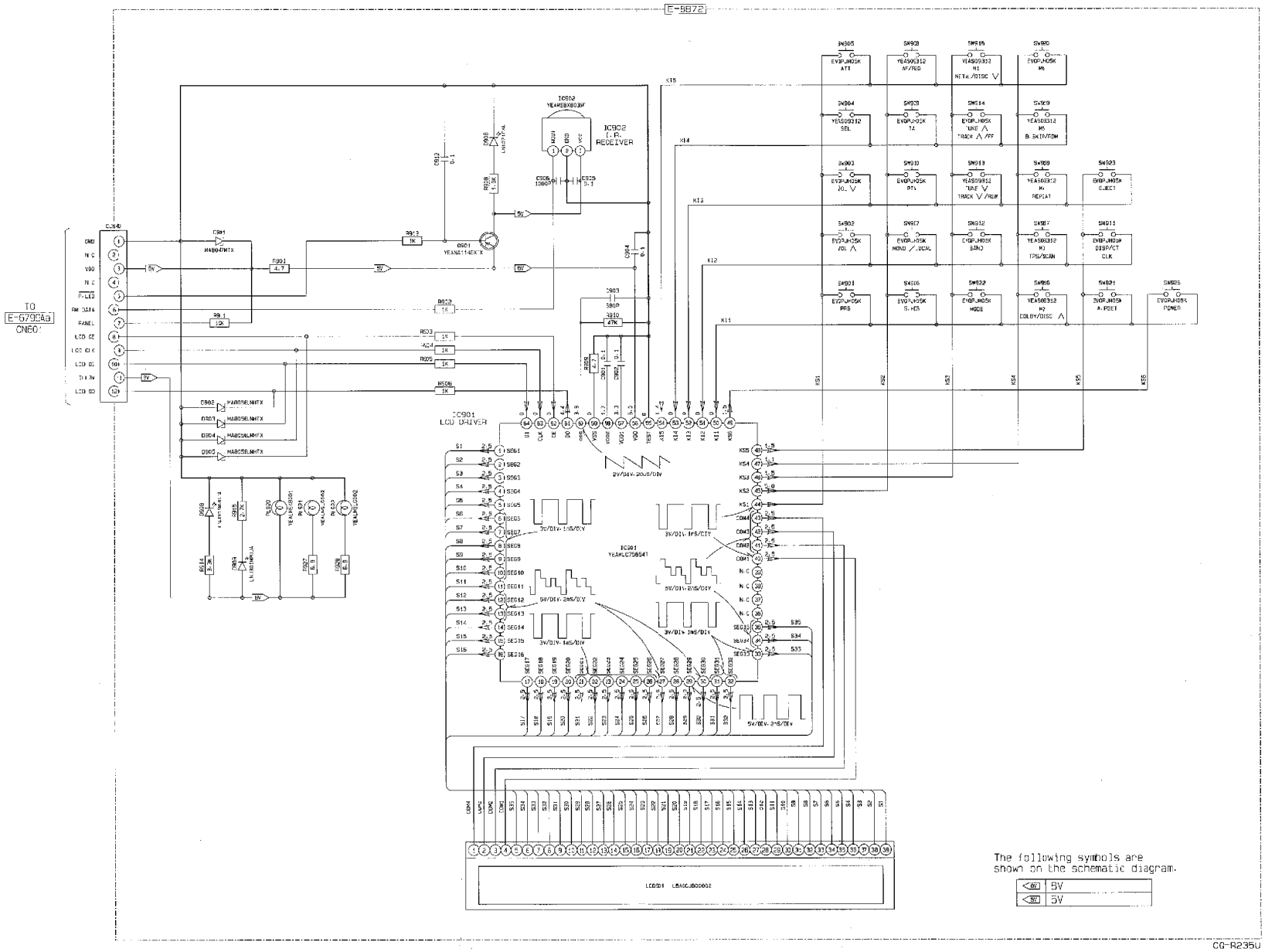


20 SCHEMATIC DIAGRAM

20.1. Main Block



20.2. Display Block



20.3. Tape Block